This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

3 3433 06820049 6

MICROFILMED
DATE 6/8/93

ON

THE FUNCTIONS OF THE BRAIN

AND

OF EACH OF ITS PARTS:

WITH

OBSERVATIONS ON THE POSSIBILITY OF DETERMINING THE INSTINCTS, PROPENSITIES, AND TALENTS, OR THE MORAL AND INTELLECTUAL DISPOSITIONS OF MEN AND ANIMALS, BY THE CONFIGURATION OF THE BRAIN AND HEAD.

F. Jos. Gall.

Boston. Pub.^d by Marsh, Capen & Lyon.

Pendleton's Lithog.^y

THE
PHRENOLOGICAL
LIBRARY.

EDITED BY NAHUM CAPEN.

BOSTON,
MARSH, CAPEN & LYON, PUBLISHERS.

G.G. Smith Sc.

ON THE

ORIGIN OF THE MORAL QUALITIES
AND
INTELLECTUAL FACULTIES
OF
MAN,
AND THE CONDITIONS OF THEIR MANIFESTATION.

By FRANÇOIS JOSEPH GALL, M. D.

TRANSLATED FROM THE FRENCH,
By WINSLOW LEWIS, Jr., M. D., M. M. S. S.

IN SIX VOLUMES.

VOLUME I.

ASTOR LIBRARY
NEW-YORK.

BOSTON:
MARSH, CAPEN & LYON.
1835.

298 g'02

Entered according to the act of Congress, in the year 1835, by MARSH, CAPEN & LYON, in the Clerk's Office of the District Court of Massachusetts.

PRINTED BY WILLIAM A. HALL & CO.

5029
7. P.

THE PHRENOLOGICAL LIBRARY.

EDITED BY

NAHUM CAPEN.

The design of the Phrenological Library will embrace works on Human and Comparative Anatomy, the Physiology of the Brain, Mental Philosophy, Natural Theology, Ethics, Political Economy, Education, Criminal Legislation, and such works, as have for their object, the improvement and happiness of man. The volumes will be printed and bound, in a uniform style, and no pains or expense will be spared, to render the series both useful and interesting.

The following Works will be published, in the order in which they stand.

Vols. 1, 2, 3, 4, 5, 6. Dr. Gall's Works, on the Functions of the Brain, and of each of its parts; with Observations on the possibility of determining the Instincts, Propensities, and Talents, and the Moral and Intellectual Dispositions of Men and Animals, by the Configuration of the Brain and Head.

Vol. 7. The Constitution of Man, considered in relation to External Objects. By George Combe. Revised by the author.

Vol. 8. NECESSITY OF POPULAR EDUCATION, as a National Object; with Hints on the Treatment of Criminals, and Observations on Homicidal Insanity. By James Simpson, Advocate. A new, and materially revised edition.

Vol. 9. THE PHILOSOPHY OF SLEEP. By Robert Macknish, LL. D. A new and revised edition.

Vol. 10. AN ESSAY ON SOME SUBJECTS CONNECTED WITH TASTE—including Objections to the Theory of Association, as proposed by Mr. Alison; and an Explanation of Differences in Taste, on the Principles of Phrenology. By Sir Geo. S. Mackenzie, Bart., F. R. S. London, and Edinburgh, F. S. S. A., &c. A new edition, revised by the author.

DEDICATION.

TO

PROFESSOR ELLIOTSON,

OF THE LONDON UNIVERSITY:

DISTINGUISHED ALIKE

AS THE

SCIENTIFIC PHYSICIAN AND THE ABLE ADVOCATE

OF THE SCIENCE OF THE MIND,

THIS TRANSLATION

IS MOST RESPECTFULLY INSCRIBED, BY

THE TRANSLATOR.

TRANSLATOR'S PREFACE.

The discoveries of Gall have hitherto been promulgated in Great Britain, and in this country, by means of the works of his disciples; and the greatest and last labor of the 'créateur de la physiologie du cerveau,' has, until now, been suffered to remain as 'sealed volumes,' to those ignorant of the language in which they originally appeared. It is now, at least conceded, that the labors of Gall, and his no less illustrious associate, have been the foundation of all the additions made to the knowledge of the nervous system, additions which have been followed by important practical results. The basis of the great superstructure is now given to the public in these volumes, the first five of which contain the physiological exposition of the brain, and the sixth, Gall's defence of his views of the anatomy of that organ, in critical analyses of the opinions of Tiedemann, Jourdan, &c. &c. It will be found a work of great interest, on a great subject. 'If Phrenology be the exposition of the true functions of the brain, and of the real philosophy of mind, it obviously carries consequences of the greatest magnitude in its train. It will not remove the mystery which hangs over the connection between mind and matter, betwixt that which thinks, and that which does not think; but it has opened new and most important views of *the manner* in which corporeal and mental constitutions of man influence, or act and react on each other; and Dr. Gall's name will, in consequence, stand second to none that has hitherto graced the annals of scientific discovery.' He, who has thus led the way to anatomical and physiological accuracy, in investigations of the brain, should be known by his own writings, and this translation has been, therefore, prepared, to introduce to the English reader, the productions of one of the greatest modern philosophers. As MARSH, CAPEN & LYON have it in view to publish the plates, illustrative of this work, at some future time, we have retained the references to them, as they stand in the original.

W. L., JR.

Boston, September, 1835.

CONTENTS.

Page.

Biography of Dr. Gall 13

Advertisement 53

Introduction 57

Moral part of the Physiology of the Brain.

SECTION I.

Of the nature of man, and of the difference between vegetable and animal life 71

Of the functions of man and animals, which belong to animal life, or, the special functions of the brain 79

Is it permitted, is it even necessary, to compare man with animals, in order to acquire a complete knowledge of his nature, moral and intellectual ? 91

SECTION II.

On the origin of the mechanical aptitudes, instincts, propensities, talents in general, and of the moral and intellectual faculties of man and animals 95

The mechanical aptitudes, instincts, propensities, talents in general, and the moral qualities and intellectual faculties of men and animals, are innate 96

Exposition and refutation of the different opinions in relation to the origin of instinctive forces, moral and intellectual, in man and animals 105

The senses, and the sensations received by external impressions, cannot give truth to any ingenious aptitude, any instinct, propensity, sentiment, or talent, or any moral or intellectual faculty 106

Of sensation and of touch 110

Of the functions of the senses in general 128

Education perfects, deteriorates, represses, and directs the innate faculties, but can neither destroy nor produce any . . 135

Continuation of the exposition and of the refutation of different opinions, on the origin of our moral qualities and intellectual faculties.

Influence of climate and food on the moral and intellectual forces of man 149
Influence of wants on the instincts, propensities, and faculties of animals, and of man 150
Can attention give rise to any instinct, faculty, or propensity, whatsoever? 156
Can pleasure and pain produce any moral quality, or intellectual faculty? 159
Are the passions and the desire of glory, the source of our qualities and faculties? 160
Does social life give rise to factitious qualities or faculties? . 161

SECTION III.

On the conditions required for the manifestation of moral qualities and intellectual faculties 172
The manifestation of moral qualities and intellectual faculties, depends on material conditions 173
1. The moral qualities and intellectual faculties manifest themselves, increase, and diminish, according as their organs are developed, increase in strength, and are impaired . . . 174
2. When the development of the organs of the moral qualities and intellectual faculties does not follow its usual order, the manifestation of the functions of these organs likewise departs from its usual regular progress 175
3. If the development and the perfection of the cerebral organs has not been complete, the manifestations of the respective qualities and faculties remain equally incomplete . . . 177
4. When the organs of the mind and soul have acquired a high degree of development and perfection, there results to these organs, the possibility of manifesting their functions with great energy 179
5. It is only by the difference in the organization of the two sexes, that we are enabled to explain, how certain faculties are more energetic in man, and others in woman . . . 182
6. When the conformation of the brain of several individuals, is similar, the propensities and the talents are similar, however different the form of the rest of the body; and when the conformation of the brain is different, the propensities

and talents differ, whatever resemblance may exist in the rest of the body 183
7. When the physical constitution is transmitted from fathers to children, these participate in the same proportion, in their moral qualities and intellectual faculties 184
8. The state of waking, of sleep, and dreaming, also, prove that the exercise of the moral and intellectual faculties is subordinate to organization 185
9. Every thing which sensibly changes, either weakens or irritates the organization, and especially the nervous system, and also produces considerable alterations in the exercise of the mental faculties 186

SECTION IV.

Of Fatalism, Materialism, and Moral Liberty . . . 191
Of Materialism 196
Of Fatalism 206
Moral Good and Evil 210
How do primitive dispositions, essentially good, degenerate into evil propensities ? 216
Free Will 218
Unlimited Liberty 219
Absolute Liberty 219
Of Illusory Liberty 222
Moral Liberty 224
Objection 233
Reply 234
Objection 235
Answer 235
Objection 236
Answer 238
Summary of the fourth section 248

SECTION V.

Application of my principles to man, considered as an object of education and punishment.—Preliminary suggestions . . 250
Application of my principles to man, considered as the object of education 255
Application of my principles to man, considered as an object of correction and punishment 260
Of houses of correction and prisons 262
Of repentance, or the conscience of malefactors 268

The degree of culpability and of expiation differ, according to the different condition of the individual, although the illegal act and the punishment be essentially the same . . . 272

Crimes and misdemeanors are not committed of themselves; they cannot, therefore, be considered as abstract beings.

Crimes and offences, are the results of individuals acting; they, therefore, receive their character from the nature and situation of these individuals; and they can only be estimated and determined, according to the nature and situation of these same individuals 274

Of the gradation of punishments, and of the punishment of death 276

Application of my principles to illegal actions, where the determination of the moral liberty and of the degree of responsibility is subject to peculiar difficulties 282

Of Infanticide 284

Other causes of moral liberty greatly weakened . . . 301

Violent propensity to the commission of theft, destroying the moral freedom 308

Excessive propensity to kill, enfeebling moral liberty . . 311

Application of my principles to illegal acts, which result from a peculiar weakness of the mental faculties 316

Applications of my principles to illegal actions, which are the consequence of mental alienation 321

Of intermittent alienations, during the access of which, certain faculties or certain propensities manifest themselves with great energy 325

Of partial alienations 326

Of reasoning alienations 328

Of madness, accompanied with visions and inspirations . . 332

Of alienations, which lead their subjects to attempt the lives of their relations, of their children or of other persons, innocent in respect to them 335

BIOGRAPHY OF DR. GALL.*

François Joseph Gall was born in a village of the Grand Duchy of Baden, on the 9th of March, 1758. His father was a merchant and mayor of Tiefenbrun, a village two leagues distant from Pforzheim, in Swabia. His parents, professing the Roman Catholic religion, had intended him for the church; but his natural dispositions were opposed to it. His studies were pursued at Baden, afterwards at Brucksal, and then were continued at Strasburg. Having selected the healing art for his profession, he went, in 1781, to Vienna, the Medical School of which had obtained great reputation, particularly since the times of Van Swieten and Stahl.

Dr. Gall gives an account, of which the following is an abstract, of the manner in which he was led to the study of the natural talents and dispositions of men, his views of which terminated in the formation of the Phrenological System.

From an early age he was given to observation, and was struck with the fact, that each of his brothers and sisters, companions in play, and schoolfellows, possessed some peculiarity of talent or disposition, which distinguished him from others. Some of his schoolmates were distinguished by the beauty of their penmanship, some by their success in arithmetic, and others by their talent for acquiring a knowledge of natural history, or of languages. The compositions of one were remarkable for elegance, while the style of another was stiff and dry; and a third connected his reasonings in the closest manner, and clothed his argument in the most forcible language. Their dispositions were equally different, and this diversity appeared also to determine the direction of their partialities and aversions. Not a few of them manifested a capacity for employments which they were not taught: they cut figures in wood, or delineated them on paper: some devoted their leisure to painting, or the culture of a garden, while their comrades abandoned themselves to noisy games, or traversed the woods to gather flowers, seek for birds' nests, or catch butterflies. In this manner each individual presented a character peculiar to himself; and Gall never observed, that the individual, who, in one year, had displayed selfish or knavish dispositions, became in the next a good and faithful friend.

---

* This Biography is compiled chiefly from "The Transactions of the Edinburgh Phrenological Society," "The Edinburgh Phrenological Journal," and the "*Journal de la Société Phrénologique de Paris.*" Ed.

The scholars with whom young Gall had the greatest difficulty in competing, were those who learned by heart with great facility; and such individuals frequently gained from him by their repetitions the places which he had obtained by the merit of his original compositions.

Some years afterwards, having changed his place of residence, he still met individuals endowed with an equally great talent of learning to repeat. He then observed, that his schoolfellows, so gifted, possessed prominent eyes; and he recollected, that his rivals in the first school had been distinguished by the same peculiarity. When he entered the University, he directed his attention, from the first, to the students whose eyes were of this description, and he soon found that they all excelled in getting rapidly by heart, and giving correct recitations, although many of them were by no means distinguished in point of general talent. This observation was recognized also by the other students in the classes; and, although the connection betwixt the talent and the external sign was not at this time established upon such complete evidence as is requisite for a philosophical conclusion, yet Dr. Gall could not believe that the coincidence of the two circumstances thus observed was entirely accidental. He suspected, therefore, from this period, that they stood in an important relation to each other. After much reflection, he conceived, that if Memory for words was indicated by an external sign, the same might be the case with the other intellectual powers; and, from that moment, all individuals distinguished by any remarkable faculty became the objects of his attention. By degrees, he conceived himself to have found external characteristics, which indicated a decided disposition for Painting, Music, and the Mechanical Arts. He became acquainted, also, with some individuals remarkable for the determination of their character, and he observed, a particular part of their heads to be very largely developed. This fact first suggested to him the idea of looking to the head for signs of the Moral Sentiments. But in making these observations, he never conceived, for a moment, that the *skull* was the cause of the different talents, as has been erroneously represented;—he referred the influence, whatever it was, to the Brain.

In following out, by observations, the principle which accident had thus suggested, he for some time encountered difficulties of the greatest magnitude. Hitherto he had been altogether ignorant of the opinions of Physiologists, touching the brain, and of Metaphysicians respecting the mental faculties, and had simply observed nature. When, however, he began to enlarge his knowledge of books, he found the most extraordinary conflict of opinions every where prevailing, and this, for the moment, made him hesitate about the correctness of his own observations. He found that the moral sentiments had, by an almost general consent, been consigned to the thoracic and abdominal viscera; and, that while Pythagoras, Plato, Galen, Haller, and some other Physiologists, placed the sentient soul or intellectual faculties in the brain, Aristotle placed it in the heart, Van Helmont in the stomach, Des Cartes and his followers in the pineal gland, and Drelincourt and others in the cerebellum.

He observed also that a greater number of Philosophers and Physiologists asserted, that all men are born with equal mental faculties; and that the differences observable among them are owing either to education, or to the accidental circumstances in which they are placed.

If all differences are accidental, he inferred that there could be no natural signs of predominating faculties, and consequently, that the project of learning, by observation, to distinguish the functions of the different portions of the brain, must be hopeless. This difficulty he combated, by the reflection that his brothers, sisters, and schoolfellows had all received very nearly the same education, but that he had still observed each of them unfolding a distinct character, over which circumstances appeared to exert only a limited control. He observed also, that not unfrequently they, whose education had been conducted with the greatest care, and on whom the labors of teachers had been most freely lavished, remained far behind their companions in attainments. "Often," says Dr. Gall, "we were accused of want of will, or deficiency in zeal; but many of us could not, even with the most ardent desire, followed out by the most obstinate efforts, attain in some pursuits even to mediocrity; while in some other points, some of us surpassed our schoolfellows without an effort, and almost, it might be said, without perceiving it ourselves. But, in point of fact, our masters did not appear to attach much faith to the system which taught the equality of mental faculties; for they thought themselves entitled to exact more from one scholar, and less from another. They spoke frequently of natural gifts, or of the gifts of God, and consoled their pupils in the words of the gospel, by assuring them that each would be required to render an account, only in proportion to the gifts which he had received." *

Being convinced, by these facts, that there is a natural and constitutional diversity of talents and dispositions, he encountered, in books, still another obstacle to his success in determining the external signs of the mental powers. He found that, instead of faculties for languages, drawing, distinguishing places, music, and mechanical arts, corresponding to the different talents which he had observed in his schoolfellows, the metaphysicians spoke only of general powers, such as perception, conception, memory, im-

---

* Preface by Dr. Gall to the "Anatomie, &c. du Cerveau."

agination, and judgment; and when he endeavored to discover external signs in the head, corresponding to these general faculties, or to determine the correctness of the physiological doctrines regarding the seat of the mind, as taught by the authors already mentioned, he found perplexities without end, and difficulties insurmountable.

Dr. Gall, therefore, abandoning every theory and preconceived opinion, gave himself up entirely to the observation of nature. Being Physician to a Lunatic Asylum in Vienna, he had opportunities, of which he availed himself, of making observations on the insane. He visited prisons, and resorted to schools: he was introduced to the courts of Princes, to colleges and the seats of Justice; and wherever he heard of an individual distinguished in any particular way, either by remarkable endowment or deficiency, he observed and studied the development of his head. In this manner, by an almost imperceptible induction, he conceived himself warranted in believing that particular mental powers are indicated by particular configurations of the head.

Hitherto he had resorted only to Physiognomical indications, as a means of discovering the functions of the brain. On reflection, however, he was convinced that Physiology was imperfect when separated from Anatomy. Having observed a woman of fifty-four years of age, who had been afflicted with hydrocephalus from her youth, and who, with a body a little shrunk, possessed a mind as active and intelligent as that of other individuals of her class, Dr. Gall declared his conviction, that the structure of the brain must be different from what was generally conceived,—a remark which Tulpius also had made, on observing a hydrocephalic patient, who manifested the mental faculties. He, therefore, felt the necessity of making anatomical researches into the structure of the brain.

In every instance, when an individual, whose head he had observed while alive, happened to die, he used every means to be permitted to examine the brain, and frequently did so; and he found, as a general fact, that on removal of the skull, the brain, covered by the dura mater presented a form corresponding to that which the skull had exhibited in life.

The successive steps by which Dr. Gall proceeded in his discoveries, are particularly deserving of attention. He did not, as many have imagined, first dissect the brain, and pretend by that means to have discovered the seats of the mental powers; neither did he, as others have conceived, first map out the skull into various compartments, and assign a faculty to each, according as his imagination led him to conceive the place appropriate to the power. On the contrary, he first observed a concomitance betwixt particular talents and dispositions, and particular forms of the head: he next ascertained, by removal of the skull, that the figure and size of the brain are indicated by these external forms; and it was only after these facts were determined, that the brain was minutely dissected, and light thrown upon its structure.

Dr. Gall was first known as an author by the publication of two chapters of an extensive work, entitled, "Philosophisch-medicinische Untersuchungen über Natur und Kunst im gesunden und kranken Zustande des Menschen, Wien, 1791." The continuation of this work has never appeared; but, in the first of the two chapters printed, he has evinced the spirit with which his researches into the moral and intellectual nature of man were subsequently conducted. The first written notice of his inquiries concerning the head appeared in a familiar letter to Baron Retzer, which was inserted in the German periodical journal " Deutschen, Mercur," in December, 1798. In this letter he announces the publication of a work upon his views concerning the brain; but circumstances induced him to alter his intention.

In reading it, one will be surprised to find contained in so few pages, written so long ago, all the principles of the physiology of the brain. It will be observed, that Gall clearly defined the object of his researches; to wit, a knowledge of the brain, in relation to the fundamental qualities of man, illustrated by that of the instincts and propensities of animals in connection with their cerebral organization. The reader will perceive in it all the useful applications which he proposed to make of his new doctrines to medicine, to morals, to legislation, to every thing, in a word, which relates to the physical, moral, and intellectual nature of man.

This paper is a valuable document for the history of the science, and should convince every one that to Gall alone, belongs the glory of having discovered the true physiology of the brain.*

Letter from Dr. F. J. Gall, to Joseph Fr. De Retzer, upon the Functions of the Brain, in Man and Animals.†

I have at last the pleasure, my dear Retzer, of presenting you a sketch of my Treatise upon the Functions of the Brain; and upon the possibility of distinguishing some of the dispositions and propensities, by the shape of the head and the skull. I have observed, that many men of talent and learning, awaited with confidence the result of my labors, while others set me down as a visionary, or a dangerous innovator.

But, to the subject: my purpose is to ascertain the functions of the brain in general, and those of its different parts in particular; to show that it is possible to ascertain different dispositions and inclinations by the elevations and depressions upon the head; and to present in a clear light the most important consequences which result therefrom to medicine, morality, education, and legislation—in a word, to the science of human nature.

To do this effectually, it is necessary to have a large collection of drawings and plans. Therefore, with regard to particular qualities and their indications only, I shall now submit to my readers so much as is necessary for the establishment and illustration of the fundamental principles.

The particular design of my work is to mark the historical outline of my researches; to lay down the principles, and to show their application. You will readily conceive, that the study of the real springs of thought and action in man, is an arduous undertaking. Whether I succeed or not, I shall count upon your indulgence and support, if only on account of the hardihood of the enterprise.

---

* Fossati.

† Journal de la Société Phrénologique de Paris.

Be so good as to recollect, that I mean by the head or cranium, the bony box which contains the brain; and of this, only those parts which are immediately in contact with it. And do not blame me for not making use of the language of Kant. I have not made progress enough in my researches to discover the particular organ for sagacity, for depth, for imagination, for the different kinds of judgment, &c. I have even been sometimes wanting precision in the definition of my ideas, my object being to make known to a large number of readers the importance of my subject.

The whole of the work is divided into two parts, which together makes about ten sheets.

Part I.

contains the principles. I start with my readers from that point to which nature had conducted me.* After having collected the result of my *tedious experiments*, I have built up a theory of their laws of relation. I hasten to lay before you the fundamental principles.

I. The faculties and the propensities innate in man and animals.

You surely are not the man to dispute this ground with me; but, follower of Minerva, you should be armed to defend her cause. Should it appear from my system, that we are rather slaves, than masters of our actions, consequently dependent upon our natural impulses, and should it be asked what becomes of liberty? and how can the good or evil we do, be attributed to us?—I shall be permitted to give you the answer, by extracting it literally from my preface. You can strengthen the argument by your metaphysical and theological knowledge.

Those who would persuade themselves, that our dispositions (or qualities) are not innate, would attribute them to education. But have we not alike acted passively, whether we have been formed by our innate dispositions, or by education? By this objection, they confound the ideas of faculties, inclinations, and simple disposition, with the mode of action itself. The animals themselves are not altogether subject to their dispositions and propensities. Strong as may be the instinct of the dog to hunt, of the cat to catch mice, repeated punishments will, nevertheless, prevent the action of their instincts! Birds repair their nests when injured; and bees cover with wax any carrion which they cannot remove. But man possesses, besides the animal qualities, the faculty of speech, and unlimited *educability*,—two inexhaustible sources of knowledge and action. He has the sentiment of truth and error, of right and wrong: he has the consciousness of free-will; the past and the future may influence his action; he is endowed with moral feeling, with conscience, &c. Thus armed, man may combat his inclinations: these indeed have always attractions, which lead to temptation; but they are not so strong, that they cannot be subdued and kept under by other and stronger inclinations which are opposed to them. You have a voluptuous disposition, but, having good morals, conjugal affection, health, regard for society and for religion, as your preservatives, you resist it. It is only this struggle against the propensities which gives rise to virtue, to vice, and moral responsibility. What would that self denial, so much recommended, amount to, if it did not suppose a combat with ourselves? and then, the more we multiply and fortify the preservatives, the more man gains in free agency and moral liberty. The stronger are the internal propensities, the stronger should be the preservatives; from them result the necessities and the utility of the most intimate knowledge of man, of the theory of the origin of his faculties and inclinations, of education, laws, rewards, punishments, and religion. But the responsibility ceases, even according to the doctrine of the most rigid theologians, if man is either not excited at all, if he is absolutely incapable of resistance when violently excited. Can it be, that there is any merit in the continence of those who are born eunuchs? Rush mentions the case of a woman, who, though adorned by every other moral virtue, could not resist her inclination to steal. I know many similar examples among others, of an irresistible inclination to kill. Although we reserve to ourselves the right to prevent these unhappy beings from injuring us, all punishment exercised on them is not less unjust than useless: they merit indeed only our compassion. I hope some day to render the proof of this rare, but sad fact, more familiar to judges and physicians. Now that our opponents are tranquilized, let us take up these questions—in what manner are the faculties and the propensities of man connected with his organization? are they the expression of a principle of mind purely spiritual, and acting purely by itself? or is the mind connected with some particular organization? if so, by what organization?—From the solution of these questions, we shall derive the second principle.

---

* The original is obscure: the author means, probably, that nature, or the natural process of induction, having led him to certain principles, he starts from them with his readers. Tr.

II. The faculties and propensities of man have their seat in the brain.

I adduce the following proofs:—1. The functions of the mind are deranged by the lesion of the brain: they are not immediately deranged by the lesion of other parts of the body.

2. The brain is not necessary to life; but as nature creates nothing in vain, it must be that the brain has another distinction; that is to say,—

3. The qualities of the mind, or the faculties and propensities of men and animals, are multiplied and elevated in direct ratio to the increase of the mass of brain, proportionally to that of the body; and especially in proportion to the nervous mass. Here we find ourselves associated with the boar, the bear, the horse, the ox—with the camel, dolphin, elephant, and the stupid sloth. A man like you, possesses more than double the quantity of brain in a stupid bigot; and at least one-sixth more than the wisest or the most sagacious elephant. By this, we are led to admit the second principle here laid down.

III. and IV. The faculties are not only distinct and independent of the propensities, but also the faculties among themselves, and the propensities among themselves, are essentially distinct and independent: they ought, consequently, to have their seat in parts of the brain distinct and independent of each other.

Proof 1. We can make the qualities of the mind alternately act and repose; so that one, after being fatigued, rests and refreshes itself, while another acts and becomes fatigued in turn.

2. The dispositions and propensities exist among themselves, in variable proportions in man, as also in animals of the same kind.

3. Different faculties and propensities exist separately in different animals.

4. The faculties and propensities develop themselves at different epochs; some cease, without the other diminishing, and even while the other increases.

5. In diseases and wounds of certain parts of the brain, certain qualities are deranged, irritated, or suspended; they return by degrees to their natural state, during the curative process.

I do not imagine myself a man sufficiently great enough to establish any thing by bare assertion: I must endeavor, therefore, to establish each one of these facts by proof. Nevertheless, some timid minds will object thus: If you allow that the functions of the mind are produced by corporeal means, or by certain organs, will you not assail the spiritual nature and the immortality of the soul? Condescend to hear my answer. The naturalist endeavors to penetrate the laws of the material world only, and supposes that no natural truth can be in contradiction with an established truth; he now finds, that neither the mind or body can be destroyed without the immediate order of the Creator; but he can draw no conclusion as to spiritual life. He contents himself with perceiving and teaching, that the mind is chained in this life to a corporeal organization.

Thus much in general: but for details, I answer in the following manner. In the preceding objection, the being acting, is confounded by the instrument by which he acts. That which I laid down respecting the lower faculties, that is to say, of the inferior organs of the functions of the mind, in numbers 1, 2, 3, 4, 5, takes place also with it in regard to the external senses. For example, while the fatigued eye reposes, we can listen attentively; the hearing may be destroyed, without the vision being impaired; some of the senses may be imperfect, while others are in full force; worms are entirely destitute of hearing and sight, but they possess a perfect touch; the new-born puppy is for several days both blind and deaf, while his taste is perfectly developed ; in old age, the hearing generally diminishes before the sight ; while the taste almost always remains unimpaired. Hence results the proof of the existence of the senses by themselves, and of their independence, which no one doubts. Has any one ever drawn the conclusion, that the mind ought to be material or mortal, from the essential difference of the senses? Is the mind which sees, different from the mind that hears? I extend the comparison a little farther: he is mistaken, who thinks that the eye sees, that the ear hears, &c ;—each external organ of sense is in communication by nerves with the brain; and at the commencement of the nerves is a proportionable mass of brain which constitutes the true internal organ of each sensitive function. Consequently, the eye may be ever so sound, the optic nerve may be ever so perfect, and yet, if the internal organ is impaired or destroyed, the eye and the optic nerves are of no avail. The external instruments of sense have, consequently, their organs also in the brain, and these external instruments are only the means by which the internal organs are put in relation with external objects : it is for these reasons, that it never entered the head of Boerhaave, nor of Haller, nor of Mayer, nor even of the pious Lavater, who seeks for the qualities of mind in the head, and of character in the body, that any thing could be inferred against the doctrine of the immateriality and immortality of the soul, from the difference and independence of the faculties and propensities, and of their internal organs. The same mind which sees through the organ of sight, and which smells through the olfactory organ, *learns by heart* through the organ of memory, and does good through the organ of benevolence. It is the same spring which puts in motion fewer wheels for you and more for me. In this way the general functions of the brain are established.

I now proceed to prove, that we can establish the assistance and the relation of many faculties and propensities, by the formation of the cerebral development. By which means will be demonstrated, at once, the functions of the different cerebral parts.

V. Of the distribution of the different organs and their various development, arising from different forms of the brain.

Among the proofs in support of this principle, I point out the differences of conformation between carnivorous, frugivorous, and omnivorous animals. Then I show the cause of the difference between different species of animals, also the cause of accidental differences of species and individuals.

VI. From the totality and the development of determinate organs, results a determinate form, either of the whole brain, or of its parts as separate regions.

Here I take the opportunity to show, that an organ is the more active, the more it is developed, without denying other exciting causes of its activity. But how is all this to lead us to a knowledge of the different faculties and the different propensities, by the formation of the skull? Is, then, the form of the skull moulded upon that of the brain?

VII. From the formation of the bones of the head, until the most advanced period of life, the form of the internal surface of the skull is determined by the external form of the brain: we can then be certain of the existence of some faculties and propensities, while the external surface of the skull agrees with its internal surface, or so long as the variation is confined to certain known limits.

Here I explain the formation of the bones of the head, and I prove that, from the moment of birth, they receive their form from the brain. I speak afterwards of the influence of other causes upon the conformation of the head; among which causes we may rank continual or repeated violence. I show that the organs develop themselves, from the earliest infancy, until their final completion, in the same proportion, and the same order, as the manifestation of the faculties and natural propensities. I show, besides, that the bones of the head take on their different forms in the same proportion, and in the same order. I show, finally, the gradual diminution of our faculties, by the diminution of the corresponding organs, and how nature deposits in the vacant spaces new portions of bony matter. All these things were heretofore unknown in the doctrine of the bones of the head. By these, is the first step taken for the determination of the particular functions of the different parts of the brain.

Part II.

Application of general principles.

Establishment and determination of the faculties and propensities existing of themselves.

As I suppose a particular organ for each one of our independent qualities, we have only to establish what are the independent qualities, in order to know what are the organs which we may hope to discover. For many years I met great difficulties in this research, and at last I am convinced, that, as in every thing else, we take the nearest and surest road if we lay aside our artificial logic, and allow ourselves to be guided by facts. I make known to my readers some of the difficulties which it was necessary to surmount. They may solve them, if they have more penetration than I have. I come at last to the means, which have served me most in the determination of the independence of the natural qualities, and I begin by pointing out more clearly the seat of the organs. It is necessary, first, to show and to examine the means by which we discover the seat of the organs. Among these means I cite,

1. The discovery of certain elevations or certain depressions, when there are determined qualities. I mark here the course which it is necessary to follow in like researches.
2. The existence of certain qualities together with the existence of certain protuberances.
3. A collection of models in plaster.
4. A collection of skulls.

We shall find many difficulties with regard to human skulls: you know how every one fears for his own head: how many stories were told about me, when I undertook such researches. Men, unhappily, have such an opinion of themselves, that each one believes, that I am watching for his head, as one of the most important objects of my collection. Nevertheless, I have not been able to collect more than twenty in the space of three years, if I except those that I have taken in the hospitals, or in the asylum for idiots. If I had not been supported by a man, who knows how to protect science, and to consult prejudices, by a man justly and universally esteemed for his qualities of mind, and for his character, I should not have been able, in spite of all my labors, to collect even a few miserable specimens.

There are those, indeed, who do not wish that even their dogs and monkeys should be placed in my collection after their death. It would be very agreeable to me, however, if persons would send me the heads of animals, of which they have observed well the characters; for example, of a dog, who would eat only what he had stolen; one who could find his master at a great distance; heads of monkeys, parrots, or other rare animals, with the histories of their lives, which ought to be written after their death, lest they should contain too much flattery. I wish you could establish the fashion, for every kind of genius should make me the heir of his head. Then, indeed, [I will answer for it with mine own,] we should see in ten years a splendid edifice, for which at present I only collect materials; it would be assuredly dangerous for a Castner, a Kant, a Wieland, and other like celebrated men, if the exterminating angel of David were placed under my order; but, with Christian patience, I shall wait the tardy will of Providence.

However, in the mean time, my dear Retzer, look a little with me into futurity, and see assembled the choice spirits of men of past ages;—how they will mutually congratulate each other, for each minute portion of utility and pleasure, which each one of them has contributed for the happiness of men. Why has no one preserved, for us, the skulls of Homer, Ovid, Virgil, Cicero, Hippocrates, Boerhaave, Alexander, Frederic, Joseph II., Catharine, Voltaire, Rosseau, Locke, Bacon, and of others?—what ornaments for the beautiful temples of the muses!

I come now to the fifth means: 5. Phenomena of the diseases and lesions of the brain. I have also much to say on this subject. The most important, is the entirely new doctrine of the different kinds of insanity, and the means of cure, all supported by facts. If all my researches should only conduct me to this result, I should deem myself sufficiently rewarded for my labors. If men of sense will not thank me, I ought, at least, to be sure of the thanks of fools.

6. The sixth means for discovering the seat of the organs, consists in examining the integral parts of different brains and their relations, always comparatively with the different faculties and the different propensities.

7. I come at last to one of my favorite subjects, the gradual scale of perfections.

Here I imagine that I am a Jupiter, who beholds from the heavens his animal kingdom crowding upon the earth. Think a little of the immense space which I am going to pass through:—from the zoophyte, to the simple polypus, up to the philosopher and the theosophist? I shall hazard, like you, gentlemen poets, some perilous leaps. In setting out I shall create only irritable vessels; then I add nerves and the hermaphrodite nature; then beings who merit something better, who can unite, and look around upon the world by the organs of sense. I make an arrangement of powers and instruments, and divide them according to my pleasure; I create insects, birds, fishes, mammalia. I make lap-dogs for your ladies, and horses for your beaux; and for myself, men, that is to say, fools and philosophers, poets and historians, theologians and naturalists. I end, then, with man, as Moses told you long before; but it has cost me more than one reflection before I could elevate him to the rank of the king of the earth. I give you the language of signs, or natural language, that you may amuse yourselves, and that if any mute should be found, there may be for him one other language besides that of speech. I assure you, that, although no one has thought of acknowledging it, I have not been able to effect this, but by putting in communication, in a strange manner, your body, and your muscles with your cerebral organs.

Strictly speaking, you only play the part of puppets in a show: when certain cerebral organs are put in action, you are led, according to their seat, to take certain positions, as though you were drawn by a wire, so that one can discover the seat of the acting organs by the motions. I know that you are blind enough to laugh at this; but if you will take the trouble to examine it, you will be persuaded, that by my discovery I have revealed to you more things than you observe. You will find the explanation of many enigmas: for example, why you defend so valiantly your women; why you become churls at your advanced age; why there is no one so tenacious of his opinion as a theologian,—*pourquoi plus d'un taureau doit éterneur lorsqu' une Europe le chatouille entre les cornes, etc.* I return at last to you, my dear Retzer, like a poor author, to satisfy you concerning my work.

The first section of the 2d part being here finished, I ought to beg my readers to examine all that I have said, so that they may be more convinced of the truth of my first principles, which I have explained in a superficial manner; but I think that he who is so blind as not to see by the light of the sun, will not do better by the additional light of a candle.

The second section contains various subjects.

1. *Of National Heads.*

Here I agree in some measure with Helvetius, whom I have heretofore contradicted. I shall, perhaps, fall out with Blumenbach, Camper, and Sœmmering, although I gladly confess that I am not certain respecting it. You may nevertheless perceive, why some of our brethren cannot count more than three,—why others cannot conceive the difference between *meum* and *tuum*,—why lasting peace among men will be always but a dream.

2. *Of the difference between the Heads of Men and Women.*

That which I could say on this subject must remain *entre nous.* We know very well that the heads of the women are difficult to unravel.

3. *On Physiognomy.*

I shall show here that I am nothing less than a physiognomist. I rather think, that the wise men have baptized the child before it was born; they call me craniologist, and the science, which I discovered, craniology; but, in the first place, all learned words displease me; next, this is not one applicable to my profession, nor one which really designates it.

The object of my researches is the brain. The cranium is only a faithful cast of the external surface of the brain, and is consequently but a minor part of the principal object. This title then is as inapplicable as would be that of maker of rhymes to a poet.

Lastly, I cite several examples to give to my readers something to examine, so that they may judge, not by principles alone, but also by facts, how much they can hope from the effect of these discoveries. You know, without doubt, my dear friend, how much strictness I observe in my comparisons.

If, for example, I do not find in *good* horse, the same signification as in *good* dog, and if I do not find in this the same as in *good* cook, or *good* philosopher, and if it is not in the same relation to each of these individuals,—the sign or word is of no value to me; for I admit no exceptions in the works of nature.

Finally, I would warn my disciples against a rash use of my doctrine, by pointing out many of its difficulties. On the other hand, I shall get rid of many doubters.

Allow me, at present, to touch upon two important defects in my work. First, it would have been my duty and my interest to conform more to the spirit of the age; I ought to have maintained, that we could absolutely ascertain by the form of the skull and the head, all the faculties and all the propensities, without exception; I ought to have given more isolated experiments, as being a hundred times repeated; I ought to have made of the whole, one speculative study, and not to submit my doctrine, as I have done, to so many investigations and comparisons; I should not ask of the world so much preparatory knowledge and perseverance; I ought to have mounted Parnassus upon Pegasus, and not upon a tortoise. Where is the charm or the interest of a science, so hard to acquire? The premature sentences which have been pronounced, the jokes and squibs which have been let off at my expense, even before my intention or my object was known, prove that men do not wait for research, in order to draw their conclusions.

I remark, in the second place, I have not sufficiently appreciated the *a priori*, that is to say, the philosophy which is to be founded upon the *a priori*. I have had the weakness in this, to judge others by myself; for that which I have considered as well established by my logic, I have invariably found incomplete or erroneous. It was always difficult for me to reason soundly upon the experiments which I make, as well as upon those made by others, although I am persuaded, that I can collect truths only on the highway of experience. It is possible, nevertheless, very possible, that others have a more favorable organization than I have, to arrive at knowedge *a priori;* but you will do me the justice not to insist upon my entering the lists with other arms than my own."

In 1796, Dr. Gall commenced giving courses of lectures at Vienna. Several of his hearers, as well as others, who had never heard him lecture, published notices of his doctrines, and have represented them with greater or less exactness. Among the better class, the following deserve to be noticed:

FRORIEP.—Who has printed an Exposition of the Doctrine of Dr. Gall.—*3d Edition*, 1802.

MARTENS.—" Quelque chose sur la physiognomie."—*Leipzic*, 1802.

WALTHER.—" Exposition critique de la Doctrine de Gall, avec quelques particularités concernant son auteur."—*Zurich*, 1802.

Having continued his lectures for five years, on the 9th of January, 1802, the Austrian Government issued an order that they should cease; his doctrines being considered dangerous to religion. A General Regulation was made upon the occasion, prohibiting all private lectures, unless a special permission was obtained from the Public Authorities. Dr. Gall understood the object of this " General Regulation," and never solicited permission, but rather stopped his courses. The doctrines, however, continued to be studied with greater zeal than before;—the prohibition strongly stimulated curiosity, and all publications on the subject continued to be permitted, provided they abstained from reflecting on the Government for issuing the "general order."

In 1800, Dr. Spurzheim commenced his labors along with Dr. Gall, and in that year assisted, for the first time, at one of his courses of lectures. He entered with great zeal into the consideration of the new doctrine; and, to use his own words, "he was simply a hearer of Dr. Gall, till 1804, at which period he was associated with him in his labors, and his character of hearer ceased."

"Dr. Spurzheim," says Dr. Gall, "who for a long time had been familiar with the physiological part of my doctrine, and who was particularly expert in anatomical researches, and in the dissection of the brain, formed the design of accompanying and of pursuing in common with me the investigations which had for their end the anatomy and physiology of the nervous system."

Gall and Spurzheim quitted Vienna in 1805, to travel together, and to pursue in common their researches.

In the period which elapsed betwixt the interdiction of Dr. Gall's lectures in 1802, and the time when he and Dr. Spurzheim left Vienna, the doctrine had made a rapid progress, not only in general diffusion, but in solid and important additions; a fact of which any one may be satisfied, by comparing the publications by Dr. Gall's auditors already mentioned, with those by his hearers in the different towns in Germany, visited in the course of his and Dr. Spurzheim's travels. The following works, in particular, afford evidence of the state of the science in 1805:

BISCHOFF.—Exposition de la Doctrine de Gall sur le Cerveau et le Crâne, suivie de remarques de Mr. Hufeland sur cette doctrine.—*Berlin*, *2de. Edit.* 1805.

BLŒDE.—Le Doctrine du Gall sur les fonctions de Cerveau.—*Dresde*, *2de. Edit.* 1805.

From 1804 to 1813, Dr. Gall and Dr. Spurzheim were constantly together, and their researches were conducted in common. They left Vienna on March 6, 1805, to go direct to Berlin, and thereafter visited the following

places: Berlin, Potsdam, Leipzic, Dresden, Halle, Jena, Weimar, Goettingen, Brauerschweig, Copenhagen, Kiel, Hamburgh, Bremen, Münster, Amsterdam, Leyden, Dusseldorf, Frankfort, Würtzbourg, Marbourg, Stuttgard, Carlsruhe, Lastall, Freybourg en Brisgaw, Doneschingue, Heidelberg, Manheim, Munich, Augsbourg, Ulm, Zurich, Bern, Bâle, Muhlhause, Paris.

In these travels "I experienced every where," says Gall, "the most flattering reception. Sovereigns, ministers, philosophers, legislators, artists, seconded my design on all occasions, augmenting my collection, and furnishing me every where with new observations. The circumstances were too favorable to permit me to resist the invitations which came to me from most of the Universities."

"This journey afforded me the opportunity of studying the organization of a great number of men of eminent talents, and of others extremely limited, and I had the advantage of observing the difference between them. I gathered innumerable facts in the schools, and in the great establishments of education, in the asylums for orphans and foundlings, in the insane hospitals, in the houses of correction, in prisons, in judicial courts, and even in places of execution; the multiplied researches on suicides, idiots, and madmen, have contributed greatly to correct and confirm my opinions."*

From November, 1807, Dr. Gall made Paris his permanent home.

In November, 1807, Dr. Gall, assisted by Dr. Spurzheim, delivered his first course of public lectures in Paris. "His assertions," says Chenevix, "were supported by a numerous collection of skulls, heads, casts; by a multiplicity of anatomical and physiological facts. Great indeed was the ardor excited among the Parisians, by the presence of the men, who, as they supposed, could tell their fortunes by their heads. Every one wanted to get a peep at them; every one was anxious to give them a dinner, or supper; and the writer of this article actually saw a list on which an eager candidate was delighted to inscribe himself for a breakfast, distant only three months and a half; at which breakfast, he sat a wondering guest."*

---

* An account of their visit to the prisons in Berlin and Spandau, may be found in the 6th volume of this work.

In 1808, they presented a joint memoir, on the anatomy of the brain, to the French Institute. We present you, said they, in their memoir, "*Une déscription du Systeme Nerveux, moins d'après sa structure physique, et ses formes mécaniques que d'après des Vues Philosophiques et Physiologiques que des hommes habitués a des considérations superieures ne refuseront point d'accueillir.*" The Institute was then in all its glory. In proportion as Buonaparte had cannonaded, it had grown enlightened. As the hero was the referendary of military justice, so was it the areopagus of scientific truth. The chief of the anatomical department was M. Cuvier; and he was the first member of this learned body to whom Drs. Gall and Spurzheim addressed themselves.

M. Cuvier was a man of known talent and acquirements, and his mind was applicable to many branches of science. But what equally distinguished him with the versatility of his understanding, was the suppleness of his opinions. He received the German Doctors with much politeness. He requested them to dissect a brain privately for him and a few of his learned friends; and he attended a course of lectures, given purposely for him and a party of his selection. He listened with much attention, and appeared well disposed toward the new doctrine; and the writer of this article heard him express his approbation of its general features, in a circle which was not particularly private.

About this time, the Institute had committed an act of extraordinary courage, in venturing to ask permission of Buonaparte to award a prize medal to Sir H. Davy, for his admirable galvanic experiments, and was still in amaze at its own heroism. Consent was obtained; but the soreness of national defeat rankled deeply within. When the First Consul was apprised that the greatest of his comparative anatomists had attended a course of lectures by Dr. Gall, he broke out as furiously as he had done against

---

* Article published in the Foreign Quarterly.

Lord Whitworth; and at his levee berated the wise men of his land for allowing themselves to be taught chemistry by an Englishman, and anatomy by a German; *sat verbum.* The wary citizen altered his language. A commission was named by the Institute to report upon the labors of Drs. Gall and Spurzheim: M. Cuvier drew up the report. In this he used his efforts, not to proclaim the truth, but to diminish the merits of the learned Germans. Whenever he could find the most distant similarity between the slightest point of their mode of operating, and any thing ever done before, he dwelt upon it with peculiar pleasure; and lightly touched upon what was really new. He even affected to excuse the Institute for taking the subject into consideration at all, saying that the anatomical researches were entirely distinct from the physiology of the brain, and the doctrines of mental manifestations. Of this part of the subject, Buonaparte, and not without cause, had declared his reprobation; and M. Cuvier was too great a lover of liberty not to submit his opinion to that of his Consul. His assertion, too, that the anatomy of the brain has nothing to say to its mental influence, he knew to be in direct opposition to fact; but even the meagre credit which he did dare to allow to the new mode of dissection, he wished to dilute with as much bitterness as he could. So unjust and unsatisfactory, so lame and mutilated did the whole report appear, that the authors of the new method published an answer, in which they accused the committee of not having repeated their experiments. Such was the reception which the science of Phrenology met with from the Academy of the great nation.*

Napoleon was unquestionably a good judge of character, and had his favorite rules in deciding upon the motives and designs of men. It was not in his nature to be either ignorant of, or indifferent to, the doctrines of Gall. Conscious of his own superiority, and eminently proud and selfish, it is not to be supposed that he would favor a system which opened to all the origin and nature of human actions. In admitting such a theory as that of Gall, he would himself become a subject of remark and investigation by his own consent; and, however well he might have liked the principles of organology, for his own exclusive use, his spirit could never have sanctioned the practice of them in others.

---

* Chenevix.

That this position may be made more apparent, we will quote the following conversation from the *Mémoires du Docteur F. Antommarchi, ou les derniers Momens de Napoléon.* He does not hesitate to express his aversion to all those philosophers who pretend to interpret the internal man by the external organization.

Lady Holland had sent a box of books, in which was also contained a bust in plaster, the head of which was covered with divisions and figures according to the craniological system of Dr. Gall. "There, doctor," said Napoleon, "that lies in your province; take and study it, and you shall then give me an account of it. I should be glad to know what Gall would say of me if he felt my head." I immediately set to work; but the divisions were inexact, and the figures misplaced, and I had not been able to put them to rights when Napoleon sent for me. I went, and found him in the midst of a mass of scattered volumes, reading Polybius. He said nothing to me at first, and continued to run over the pages of the work he held in his hand; he then threw it down, came to me, and taking me by the ears, and looking me steadily in the face, "Well! *dottoraccio di capo Corso*, you have seen the bust?—Yes, sire.—Meditated the system of Gall?—Very nearly.—Comprehended it?—I think so.—You are able to give an account of it?—Your majesty shall judge.*—To know my tastes and to appreciate my faculties, by examining my head?—Even without touching it (he began to laugh.)—You are quite up to it?—Yes, sire.—Very well, we shall talk about it when we have nothing better to do. It is a

---

* Verily the *Dottoracio's* modesty was very great, and his understanding very gigantic in its dimensions. Few men, except himself, could have studied, comprehended and mastered, in as many months as he required hours, a science which, in its application and details, is perhaps the most extensive that is known. Ed. Jour.

pis-aller, which is just as good as any other; and it is sometimes amusing to notice to what extent folly can be carried." He now walked up and down, and then asked, "What did Mascagni think of these German reveries? Come, tell me frankly, as if you were talking to one of your brethren.—Mascagni liked very much the manner in which Gall and Spurzheim develop and point out the different parts of the brain; he himself adopted their method, and regarded it as eminently fitted for discovering the structure of this interesting viscus. As to the pretended power of judging from protuberances, of the vices, tastes, and virtues of men, he regarded it as an ingenious fable, which might seduce the *gens du monde*, but could not withstand the scrutiny of the anatomist.—That was like a wise man; a man who knows how to appreciate the merit of a conception, and to isolate it from the falsehood with which charlatanism would overcharge it: I regret not having known him. Corvisart was a great partisan of Gall; he praised him, protected him, and left no stone unturned (*fit l'impossible*) to push him on to me, but there was no sympathy between us. Lavater, Cagliostro, Mesmer, have never been to my mind; I felt, I cannot tell, how much aversion for them, and I took care not to admit any one who kept them among us. All these gentlemen are adroit, speak well, excite that fondness for the marvellous which the vulgar experience, and give an appearance of truth to theories the most false and unfounded. Nature does not reveal herself by external forms. She hides and does not expose her secrets. To pretend to seize and to penetrate human character by so slight an index, is the part of a dupe or of an impostor; and what else is that crowd with marvellous inspirations, which pullulates in the bosom of all great capitals? The only way of knowing our fellow-creatures is to see them, to haunt them, and to submit them to proof. We must study them long if we wish not to be mistaken; we must judge them by their actions; and even this rule is not infallible, and must be restricted to the moment when they act; for we almost never obey our own character; we yield to transports—we are carried away by passion; such are our vices and virtues, our perversity and heroism. This is my

117

opinion, and this has long been my guide. It is not, that I pretend to exclude the influence of natural dispositions and of education; I think, on the contrary, that it is immense; but beyond that, all is system, all is nonsense."

Sovereigns, remarks Dr. Gall, are always deceived, when they ask advice from the ignorant, the jealous, the envious, the timid, or from those, who, from age, are no longer accessible to new opinions. Napoleon acquired his first notions of the value of my discoveries during his first journey to Germany. A certain metaphysical jurisconsult, E——, at Leipzig, told him, that the workings of the soul were too mysterious to leave any external mark. And, accordingly, in an answer to the report of the Institute, I had this fact in view when I terminated a passage by these words:—"And the metaphysician can no longer say, in order to preserve his right of losing himself in a sea of speculation, that the operations of the mind are too carefully concealed to admit of any possibility of discovering their material conditions or organs." At his return to Paris he scolded sharply (*tança vertement*) those members of the Institute who had shown themselves enthusiastic about my new demonstrations. This was the thunder of Jupiter overthrowing the pigmies. On the instant, my discoveries were nothing but reveries, charlatanism, and absurdities; and the journals were used as instruments for throwing ridicule—an all-powerful weapon in France—on the self-constituted bumps.

We should here remark, that although Gall, merely from seeing the bust of Napoleon placed along side of those of the generals of the Austrian armies, predicted the immortal victories of Italy, yet he never received from the Emperor the smallest mark of attention.*

Keeping in view the strong and adverse feelings of Napoleon, in relation to Phrenology, we may account for the imperfect Report of Cuvier. The Report, it should be observed, related only to the anatomical discoveries of Gall and Spurzheim;—not to their peculiar doctrines of the functions of the brain. Cuvier, however, admitted, in the Annual Report, that their "Memoir was by far the most important which had occupied the attention of the class."

---

* Phren. Jour.

That Cuvier was a phrenologist, there can be but little doubt; neither his Report, or any of his works, warrant us in supposing the contrary. Although political causes had a tendency to influence Cuvier against the doctrines of Gall,—nevertheless, these two celebrated men were made to understand and esteem each other, and, towards the end of their career, they did each other justice. Gall had already one foot in the grave when Cuvier sent him a cranium, "which," he said, "appeared to him to confirm his doctrine of the physiology of the brain." But the dying Gall replied to him who brought it, "Carry it back, and tell Cuvier, that my collection only wants one head more, my own, which will soon be placed there as a complete proof of my doctrine." *

In 1809, Gall and Spurzheim commenced publishing their magnificent work, entitled "*The Anatomy and Physiology of the Nervous System in general, and of the Brain in particular; with Observations upon the possibility of ascertaining several intellectual and moral Dispositions of Man and Animals, by the configuration of their Heads. 4 volumes, folio, with an Atlas of* 100 *plates.*" [Price 1000 francs.]

This great work was continued by the joint exertions of Gall and Spurzheim, to the completion of two and a half volumes, and was ultimately finished by Gall in 1819. They continued their researches in common till 1813, when Spurzheim left Paris to visit Vienna and Great Britain.† During Dr. Spurzheim's absence, Dr. Gall discontinued his lectures. After his return, (1817,) he delivered one private course in his own house, and two public courses gratis, one "*à l'Ecole de Medecine,*" and the other in a hall "*de l'institution pour les Aveugles.*"

In 1819, Dr. Gall, at the request of the Minister of the Interior, commenced lecturing for the benefit of the medical students in Paris. The lectures were, like others, delivered gratis; but he was provided with the use of the operation and lecture room in the *Hospice de Perfectionnement*, for his first course, and afterwards, on account of that being too small, with the large examination room of the Institution *des Jeune Aveugles*, which is well fitted for the purpose. His audience amounted to betwixt 200 and 300; and so eagerly was he attended, that many more tickets were applied for at each course, than could be given, and the apartment was regularly crowded half an hour before the lecture began. The physiognomical expression of some of the English students, who were present at Blainville's Lecture, and who probably knew nothing of Phrenology but through the English Reviews, was truly ludicrous. They appeared to relax their features for a laugh when the name of Dr. Gall first escaped the lips of the Professor; but when they heard him spoken of with respect, and his doctrines declared to be true, the expression changed into wonder in some, and in others to absolute contempt.

---

* Jour. de la Soc. Phrénol. de Paris.

† Edin. Phren. Transactions, vol. I.

The French savans * listened to him with the same interest as those of Germany had done, and the celebrated Corvisart was, among others, one of his most enthusiastic admirers. But, alas! an absolute ruler governed France at that epoch, and he held philosophy in horror. Nothing more was required to induce the courtiers, and some literary men, to declare themselves the enemies of the doctrines broached by the German doctor. Hence the ridicule and the ignoble pleasantry which degraded the *Journal de l'Empire* and most of the secondary journals of Paris,—most unworthy means, certainly, of discussing a science so important as that which treats of the powers of the mind and functions of the brain,—means which never reached the elevated mind of the philosopher against whom they were employed, but which contributed greatly to prevent the study and propagation of the truths which Gall had announced. At last, however, his works appeared, and several of his eminent cotemporaries hastened to do him justice, and still follow the line of investigation so successfully marked out by him.

---

* Dr. Fossati's Funeral Oration on Dr. Gall.

From 1822 to 1826, Dr. Gall published an edition of his work, "*Sur les Fonctions du Cerveau,*" &c., in 6 volumes, 8vo.

In March, 1828, at the conclusion of one of his lectures, Dr. Gall was seized with a paralytic attack, from which he never perfectly recovered, and which ultimately carried him off the 22d of August, 1828, in the seventy-second year of his age.* His remains were followed to the grave by an immense concourse of friends and admirers, five of whom pronounced discourses over his grave, as is the custom in France on such occasions. His death gave rise to a succession of eulogiums and attacks in the French newspapers that had scarcely ever been paralleled, and public sentiment was warmly and loudly expressed in his favor. In proof of this, I may be allowed to quote a few lines of a letter lately received from a French friend, with whom I was intimate in Paris, but who is no phrenologist, and whose testimony is therefore impartial. After speaking of the political relations of France, he adds, "You will, I am sure, be more affected by the death of Dr. Gall, than by any political events. In truth, it is an immense loss to science. Whatever opinion we may form of the system of that illustrious man, it must be acknowledged that he has made an immense stride in the sciences of medicine and of man. You must have been satisfied with the homage paid to his memory by the side of his grave, by whatever distinguished men Paris possesses. Nothing was wanting to his glory; not even the abuse and calumnies of our *devots de gazette.*"

The person of Dr. Gall was well developed; he was five feet two inches in height, with a large chest and strong muscles; his step was firm, and his look vivid and penetrating.† His features, though not handsome, possessed a mild and pleasing expression. Every part of his head was strikingly developed, measuring, above the eyebrows and at the top of the ears, twenty-two inches, and two lines in circumference, and fourteen inches and nine lines, from the root of the nose to the occiput.

---

* Dr. Combe, Phren. Jour. vol. v. † Dr. Fossati, Paris Phren. Jou

Dr. Gall acquired an honorable reputation as a physician, writer, and philosopher, and, independent of the respect shown him by all parties, he realized the additional reward of a handsome fortune.* His skill as a physician may be inferred from the fact, that, in 1820, a medal was presented to him, executed by M. Barre, an eminent artist in Paris, by order of count Potosky, a rich Polish nobleman, who took this method of expressing his deep gratitude to Dr. Gall, who had cured him of an old and dangerous malady, for which he had in vain consulted the best medical men in Paris. On one side of the medal is the head of Dr. Gall, an admirable likeness; and on the other is Esculapius standing at the bed-side of the patient, chasing away with one hand the birds of darkness, and crushing a frog, the symbol of ignorance, under his right foot. Behind Esculapius is an altar, with a skull placed upon it, to denote the particular kind of study to which Dr. Gall was addicted. Near the couch are the arms of the count himself.

Taking Gall as a model of a phrenological portrait, it is proper that we should speak of all the cerebral organs, belonging to our nature.†

The organs of Amativeness, Philoprogenitiveness, Adhesiveness, Combativeness, and Destructiveness were all very well developed in Gall. His Secretiveness was also rather large, but he never made a bad use of it. He was too conscious of his intellectual powers to obtain his ends by cunning or fraud. He was frank and honest, but acute and penetrating.

The Marquis de Moscati gives the following account of an attempt to deceive Gall, with regard to himself, and of some interesting trials of his skill, as a phrenologist.

"Dr. Gottfried of Heidelberg, with whom I was acquainted, informed me that Dr. Gall wished to have an interview with me, in order to demonstrate to me, on the skulls, *the truth* of what he advanced, and I disbelieved; but I declined, and did every thing in my power to ridicule his system in society, with all my military friends, and through the German, French, and Italian periodicals. But when I saw that, notwithstanding my repeated diatribes, and the opposition of the medical faculty, Dr. Gall went on in making converts to his doctrine, I determined to see him, and endeavored to deceive him by presenting myself under the dress of a servant. Colonel Bucher, of the fifth dragoons, took me with him to the house of Dr. Gall, who was in Paris, and told him that he wished to know his opinion about my head; that I was an Italian, had lived with him as a servant for seven years, and during that interval had been much attached and very faithful to him; that it was for those good qualities that he had endeavored to have me instructed, but that although he had given me several masters, *for nearly three years*, I had scarcely learned to read and write *Italian*, but had not yet acquired the French language.

---

* Phren. Trans. † Fossati.

"I remember as it were now, Dr. Gall opened his large eyes, fixed them on my countenance with a look of surprise and doubt, and then began to feel my head. While he was making his observations, he now and then murmured, "*Ce n'est pas vrai! Ce n'est pas possible!!*" Shortly after having examined my cranium, he said to Bucher, that an individual with a head so well formed could not be of *the character* he had just mentioned; that on the contrary, unless I was blind and deaf, by the conformation of my cranium, he thought I was able to acquire *general knowledge, particularly the languages*, and geographical and astronomical sciences. Moreover, that if I had applied according to the development of my organs, I must be a distinguished person and a *mad poet.* When I heard this last remark, I told Bucher, *Ce n'est pas bien! tu as trahi mon secret.* I do not wonder at the Doctor's accuracy. Bucher swore that he had not betrayed me. Gall remonstrated against my suspicion, and assured me of his being totally unacquainted with my trick; but I remained doubtful about the sincerity of both of them, and continued to be an adversary to Gall and his system.

" However, from that day I began to study craniology, and made use of the skulls of the killed in battle; but I studied as one of those who *oculos habent, et non vident, aures habent et non audiunt*, and my obstinacy rendered me inaccessible to persuasion. Often when I knew well the character of some of my soldiers who died, I sent the skulls to Dr. Gall, and requested his opinion; and I must say that more than *once* his remarks were truly astonishing; but I persisted in my incredulity. In 1810, one of my lieutenants was killed at the battle of Lintz; he was a Pole of a very violent temper, a bloody duellist, and much addicted to sensuality. I forwarded his skull to Dr. Gall, and in answer to my question, he replied, that it belonged to an individual *very violent, ferocious*, and a *sensualist*. This time I was the only depository of my secret."

We come now to another quality, on which we should like to dwell, were we not obliged to confine ourselves within prescribed limits—we mean the sentiment of property.*

Many people in Paris have reproached Gall with being selfish. It cannot be denied that he was amply paid for his public lectures; that he was unfortunate in soliciting the sale of his work; and that he prosecuted some of his patients who refused to pay their bills. But we should know his own remarks on this point. "Do you see, my friend, how these wealthy people treat us and other physicians? They spend a hundred times more for their pleasures than the health we give them, and expend enormous sums on balls and dinners, while they leave their physicians unpaid. Indeed, while they largely remunerate the lawyer who gains their cause, they give nothing to the physician who saves their lives." Gall was not generous, in the common understanding of the term; but it must be considered that in his domestic economy he failed in method, and consequently was always pressed by unforeseen and urgent wants. If he was selfish, let me ask what kind of selfishness it was? He educated and supported his nephews, and young people of talents, and his table was free to every body. It is true, he was not generous to all who surrounded him, but he was so towards his domestics, and people of low condition, whose services he had received. We may say he had a love of property, but that his intellectual powers placed him above its control.

---

* Fossati.

Another faculty which Gall possessed in a remarkable degree, as his organization shows, was that of Elevation, Pride, or a high opinion of one's self. We will here quote a remarkable passage, where, in speaking of that organ, he has delineated himself. "There are certain men," says he, "with minds sufficiently strong, who are so deeply impressed with a sense of their own value, and so independent withal, that they know how to repel every external influence which tends to subject them. As far as practicable, they choose the freest countries to live in, and devote themselves to an employment that renders them independent, and exempts them from the caprices and favor of the great. That domination over their inferiors, which becomes slavery under an absolute master, would be insupportable to them. The honors and distinctions that are withheld from merit, while they are lavished on insignificant men, are but humiliations in their eyes. If they prosper, it is only by their own efforts; like the oak, they are sustained by their own strength, and it is to their own resources that they would be indebted for all they possess." He was, in fact, proud and independent. He never was anxious for titles, and cheerfully practised the profession of medicine. As a political man, he loved liberty and good laws.

There is another innate sentiment, Vanity, Ambition, Love of Glory, approaching the preceding in its nature, but still quite distinct from it, which was feeble in Gall. We always observed him to be indifferent to the praise and approbation of the multitude, as he was also to their blame and ridicule. He labored for the love of science, and under the conviction that his ideas would triumph in the end. We could recall a thousand anecdotes to prove that his vanity was not very susceptible. How many times have we seen him laugh at the squibs of the little journals, and unaffectedly despise the gross abuse which they heaped upon him. Let us cite one fact which will answer for many others. Gall had lived for some time at Berlin, with the celebrated poet Kotzebue, who profited by the occasion to learn of him the technical terms of his science, and such ideas and principles as he could best turn to ridicule. He composed his play, Cranioomania, which was immediately performed at the theatre in Berlin, and Gall attended the first representation, and laughed as heartily as any of them.

Caution, by means of which the effects of our actions are referred to the future, which sometimes renders us distrustful of the world and indecisive in forming our resolutions, was very strong in Gall. Observe what a fulness the head presents in its superior posterior lateral region. Gall proceeded with extreme prudence in every step; he was distrustful, and much disposed to give credit to bad insinuations against his friends and acquaintances, and would rather break with any one than live in the disquietude of doubt. He often said, that it is more difficult to sustain a reputation than to create one, and that we must always act as if making the first efforts to render ourselves known.

Let us now pass to the faculties whose organs are situated in the anterior part of the head, beginning with the sense of the memory of things, (Individuality.) This sense is the source of educability in man and other animals. Gall possessed it in a moderate degree, but it was not one of his most remarkable faculties.

He easily forgot whatever had no connection with his doctrines, or with any of his predominant faculties.

It was the same with the faculty of local memory, (Locality.) We will once more leave him to speak for himself. "My taste for natural history," said he, "often led me into the woods, for the purpose of ensnaring birds or taking them in their nests. In the latter object I was very fortunate, because I had often observed, towards which of the cardinal points, each species were accustomed to build their nests. I should have succeeded equally well by disposing my nets properly, because I was in the habit of ascertaining the district the bird frequented, by his song, and his movements; but when, after a week or fortnight, I went to find what birds had been taken, or to carry off a nest, it was often impossible for me to find the tree I had marked, or the nets I had placed." He also forgot the residence of his patients whom he had frequently visited in his carriage, and had considerable difficulty in remembering in what story of the building they lived. He was ignorant of geography, and whenever he looked upon a map he found something new, though he had observed it a thousand times before. So we may be sure, that if he traveled, it was not from taste, but with the sole object of propagating his doctrines.

If it be true, as we believe it is, that there is an organ of Order, Gall was absolutely destitute of it. The arrangement of his house was a curiosity. He said it was order to him. Let one imagine to himself, huddled together in his bureau-drawers, for instance, old journals, quittances, quack advertisements, letters from distinguished men, pamphlets, nuts, pieces of gold, silver, and copper, and packets of seeds. We have seen him take up a bundle of these papers, and shake out from them the money he happened to need. In this manner he kept his records and his desk.

Weaker still was his *memory of persons.* "This faculty," said he, "is too feeble in me, and the defect of it has, all my life-time, caused me a thousand troubles. When I rise from the table, I cannot distinguish either man or woman who sat by my side during the meal." In *verbal memory*, Gall was also deficient. At school he never could learn his lessons, and when the task was one that exercised the memory, he was always surpassed by his school-fellows, whom he excelled in original composition.

The organ of *the sense of language*, which gives the talent of philology, was a little better developed. He knew, besides his own, the Latin, and French language, which he wrote and spoke with facility, though defective in pronunciation, and had some knowledge of English and Italian. He had a strong dislike, however, for questions about mere words, grammatical discussions, compilations, and works of that kind. (*Pour les compilations, et autres travaux du même geure.*)

The sense of the relations of colors, which is one of the fundamental qualities indispensable to the painter, was absolutely wanting in Gall. He was obliged to depend upon the opinions of his friends, whenever he treated of painters or painting, and by that means was sometimes led to pronounce an erroneous judgment which the critics never failed to remind him of. As for his taste, he was fond of those brilliant porcelain-like pictures of modern times; and when in a gallery, he bestowed his attention on portraits, and especially on those of women when painted in a classical style.

As he was a poor judge of painting, so was he as poor an amateur in music. He generally got wearied at the Opera or Concert; but a woman's voice in conversation, he said, was very agreeable.

He was no more apt in the science of numbers; every kind of numerical calculation fatigued him, and we believe we never saw him go through a process in simple multiplication or division that was at all complicated. He knew nothing of geometry, nor the problems of mathematics. What a contrast to those philosophers who make this same science the basis of all positive knowledge!

In mechanics, architecture, and the arts, he was no happier than in calculation, music, and painting. We will only remark, that the execution of the plates of his great work, after Spurzheim ceased to overlook them, was detestable, which would not have been the case if Gall had possessed the slightest knowledge of design, or of the arts in general.

Having thus finished our notice of the organs situated in the lower part of the forehead, it remains for us to examine those higher faculties whose organs are placed in the upper part of that region. It is these that gave Gall his eminence over the generality of men.

That *comparative* sagacity, by means of which we promptly discern the relations of agreement and disagreement between the objects of our examination, and are led to search for affinities, comparisons, and similes, was very strong in Gall. Accordingly, you will observe that not only were all his researches but a continual comparison of organization with faculties, and of the faculties of man with those of other animals, but that he also employed this method in his familiar conversations and public lectures, whenever he was particularly anxious to impress his ideas on the minds of others.

The following interesting account of an interview with

Gall was published in the Birmingham Gazette, and may serve to give the reader some idea of the habits of the philosopher at home.

"Most of us find some satisfaction in tracing on Fancy's tablet the portrait of a person of whom we have heard much, and particularly after we have read many of the works of an author, but with whom we have had no personal acquaintance. It generally happens, however, that our portrait is not correct, when we compare it with the original. Thus it was with myself. I found Dr. Gall (in 1826) to be a man of middle stature, of an outline well proportioned; he was thin and rather pallid, and possessed a capacious head and chest. The peculiar brilliancy of his penetrating eye left an indelible impression. His countenance was remarkable,—his features strongly marked and rather large, yet devoid of coarseness. The general impression that a first glance was calculated to convey would be, that Dr. Gall was a man of originality and depth of mind, possessing much urbanity, with some self-esteem and inflexibility of design.

"After presenting my letters of introduction to him at seven o'clock, A. M., he showed me into a room, the walls of which were covered with bird-cages, and the floor with dogs, cats, &c. Observing that I was surprised at the number of his companions, he observed, 'All you Englishmen take me for a bird-catcher; I am sure you feel surprised that I am not somewhat differently made to any of you, and that I should employ my time in talking to birds. Birds, Sir, differ in their dispositions like men; and if they were but of more consequence, the peculiarity of their characters would have been as well delineated. Do you think,' said he, turning his eyes to two beautiful dogs at his feet, that were endeavoring to gain his attention, 'do you think that these little pets possess pride and vanity like man?' 'Yes,' said I, 'I have remarked their vanity frequently.' 'We will call both feelings into action,' said he. He then caressed the whelp, and took it into his arms; 'mark his mother's offended pride,' said he, as she was walking quietly across the chamber to her mat: 'do you think she will come if I call her?' 'Oh yes,' I answered. 'No, not at all.'

He made the attempt; but she heeded not the hand she had so earnestly endeavored to lick but an instant before. 'She will not speak to me to-day,' said the doctor. He then described to me the peculiarity of many of his birds; and I was astonished to find, that he seemed familiar also with their dispositions, (if I may be allowed the word.) 'Do you think a man's time would be wasted thus in England? You are a wealthy and a powerful nation, and as long as the equilibrium exists between the two, so shall you remain; but this never has, nor cannot exist beyond a certain period. Such is your industry, stimulated by the love of gain, that your whole life is spun out before you are aware the wheel is turning; and so highly do you value commerce, that it stands in the place of self-knowledge, and an acquaintance with nature and her immense laboratory.'

"I was delighted with this conversation: he seemed to me to take a wider view in the contemplation of man, than any other person with whom I had ever conversed. During breakfast, he frequently fed the little suitors, who approached as near as their iron bars would admit. 'You see they all know me,' said he, 'and will feed from my hand, except this black-bird, who must gain his morsel by stealth before he eats it; we will retire an instant, and in our absence he will take the bread.' On our return, we found he had secreted it in a corner of his cage. I mention these, otherwise, uninteresting anecdotes, to show how much Dr. Gall had studied the peculiarities of the smaller animals. After our breakfast, he showed me his extensive collection; and thus ended my first visit to the greatest moral philosopher that Europe has produced; to a man, than whom few were ever more ridiculed, and few ever pursued their bent more determinately, despite its effects; to a man, who alone effected more change in mental philosophy than perhaps any predecessor; to a man, who suffered more persecution, and yet possessed more philanthropy than most philosophers."

To that other form of human intelligence, viz. the *metaphysical*, Gall was strongly opposed, when it soars into the spiritual world, and pushes its inquiries into general principles and general truths, slighting, however, the material world and the relations of cause and effect. This way of thinking, and directing one's efforts in the search after truth, was none of his; he was for the positive, not the abstract.

Another remarkable manifestation of mind, *wit*, which gives a kind of relief to its possessor, Gall was endowed with in no small degree. Although he never engaged in the polemics of the Journals, yet in his works, he replied to his opponents with a keenness of satire truly astonishing. To be convinced of this, one has only to read the sixth volume of his work. Observe his piquant observations on the Editors of the *Dictionary of Medical Sciences*, in answer to the wish expressed by them, that somebody would, at last, devote himself to the physiology of the brain. He exclaims,—"Behold, an instance of lethargy, in M M. Fournier and Begin, which has lasted from the time of my arrival in Paris, 1807, to the year 1819!" While deriding the principles of the transcendentalists, and at the same time answering his opponents, he observes, "It may be certainly said, with truth, that the dead kill the living. Some time or other, when I shall take it into my head to be admired, cried up, and to have even my follies sanctioned, I mean to drown, hang and burn myself, till I am well dead; and if, notwithstanding these means of getting a reputation, my *moi* is still doomed to be concerned with the *non moi*, with the vanities of the world in *space*, I hope at least to have some titles and places to spare in *time*. *Moi*, *space* and *time*, you know, are the pivots on which the metaphysicians turn much of their reasoning."

While pointing out the piracies many *savans* had made upon his works, he reasons with them in the following style: "When nations are at war, pillage becomes a right. Now, savans who are engaged in making discoveries, are constantly at war with one another; therefore, they are allowed to pillage; therefore, the little malice of M. Boisseau is eminently rational."

The result of another manifestation of the intellect, is the *poetical talent*. This is not enough to make one a poet, (in the ordinary acceptation of the word;) for versification depends upon another faculty. Gall could never make verses. He even detested poetry, because he had no ear for harmony; but he possessed, in a high degree, the poetical power of invention.

A fundamental quality inherent in our nature, and which constitutes the strongest bond of our species, is the sentiment of *benevolence*, *compassion*, *moral sense.* Gall was exceedingly benevolent; he succored the unfortunate, and procured them the assistance of his rich patients; he encouraged talents, and rendered them all the aid in his power. If a kind of abruptness, or, more properly speaking, nonchalance, was sometimes observed in his manners, all thought of it was effaced by his benevolence. In his conversation, he was not too careful to observe those conventional forms and verbal disguises, which civilization has introduced to cover, as with a fine mantle, the bad dispositions of the soul; but the more intimately he was known, the more he was loved.

The faculty of *Imitation*, that which makes the actor and mimic, and is also of great use to the orator, inasmuch as it excites him to express by external signs what is passing within, existed in a very high degree in Gall. We had but imperfect means of judging of him as an orator, in his public lectures, where, however, notwithstanding the disadvantage of speaking in a foreign tongue, he left a deep impression on the minds of his hearers.

Let us now see what were Gall's opinions respecting God and religion. "Every where," he says, "and in all times, man, pressed by the feeling of dependence, by which he is completely surrounded, is forced to recognize at every instant, the limits of his power, and avow to himself that his fate is in the hands of a superior power. Hence, the unanimous consent of all people to adore a Supreme Being; hence, the ever-felt necessity of recurring to him, of honoring him, and rendering homage to his superiority." Thus Gall recognized God like a philosopher. He was indignant only against the abuses that men practised upon the credulity of the people; against those who make of religion a refinement of power, of ignorance, of slavery and corruption. He was indignant against the persecutions which sectarians, of different faiths, carry on against their fellow-men in the name of God and religion. He was indignant against all these abuses, because he loved the human race, and desired its happiness.

It was to his *firmness*, that Gall owes the success of his researches. Without this constancy, or rather obstinacy with which he pursued the same ideas, the same observations, and the same researches, it would have been impossible for him to carry his new science to the point where he left it.

We present a diagram of the system such as Dr. Gall made, and another comprising Dr. Spurzheim's latest modifications.

No. 1, *Zeugungstrieb*, the instinct of generation.

No. 2, *Jungenliebe*, *Kinderliebe*, the love of offspring.

No. 3, *Anhänglichkeit*, friendship, attachment.

No. 4, *Muth*, *Raufsinn*, courage, self-defence.

No. 5, *Würgsinn*, murder, the wish to destroy.

No. 6, *List*, *Schlauheit*, *Klugheit*, cunning.

No. 7, *Eigenthümsinn*, the sentiment of property.

No. 8, *Stolz*, *Hochmuth*, *Herschsucht*, pride, self-esteem, haughtiness.

No. 9, *Eitelkeit*, *Rhumsucht*, *Ehrgeitz*, vanity, ambition.

No. 10, *Behuthsamkeit*, *Vorsicht*, *Vorsichtigkeit*, cautiousness, foresight, prudence.

No. 11, *Sachgedächtniss*, *Erziehungs-fahigkeit*, the memory of things, educability.

No. 12, *Ortsinn*, *Raumsinn*, local memory.

No. 13, *Personensinn*, the memory of persons.

No. 14, *Wortgedächtniss*, verbal memory.

No. 15, *Sprachforschungssinn*, memory for languages.

No. 16, *Farbensinn*, colors.

No. 17, *Tonsinn*, music.

No. 18, *Zahlensinn*, number.

No. 19, *Kunstsinn*, *Bausinn*, aptitude for the mechanical arts.

No. 20, *Vergleichender-Scharfsinn*, comparative sagacity, aptitude for drawing comparisons.

No. 21, *Metaphysischer Tiefsinn*, metaphysical depth of thought, aptitude for drawing conclusions.

No. 22, *Witz*, wit.

No. 23, *Dichtergeist*, poetry.

No. 24, *Gutmüthigkeit*, *Mitleiden*, good-nature.

No. 25, *Darstellungsinn*, mimicry.
No. 26, *Theosophy*, theosophie, religion.
No. 27, *Festigkeit*, firmness of character.

"Philosophers," said Spurzheim, in one of his lectures, "have merely spoken of the general manifestations of the mind, and have given names to them; but we must be more particular, we must specify the powers, and hence we are obliged either to speak in circumlocution, or to give new names. Some people say they do not like new names; but if I have an idea, must I not give it a sign? If the first man gives names to all things known to him, and if in future ages things are discovered not known before, must we not name them? I will not, however, dispute about names, only let us have the powers kept distinct: I am ready to change the names at any time, if any person will suggest better."

Dr. Spurzheim's arrangement of the faculties is comprised in orders, genera, species, &c.

Special Faculties of the Mind. ORDER I.—Feelings, or Affective Faculties. GENUS I.—Propensities.

† Desire to live. * Alimentiveness. 1. Destructiveness. 2. Amativeness. 3. Philoprogenitiveness. 4. Adhesiveness. 5. Inhabitiveness. 6. Combativeness. 7. Secretiveness. 8. Acquisitiveness. 9. Constructiveness.

GENUS II.—Sentiments.

10. Cautiousness. 11. Approbativeness. 12. Self-esteem. 13. Benevolence. 14. Reverence. 15. Firmness. 16. Conscientiousness. 17. Hope. 18. Marvellousness. 19. Ideality. 20. Mirthfulness. 21. Imitation.

ORDER II.—Intellectual Faculties. GENUS I.—External Senses.

Voluntary motion. Feeling. Taste. Smell. Hearing. Sight.

GENUS II.—Perceptive Faculties.

22. Individuality. 23. Configuration. 24. Size. 25. Weight and resistance. 26. Coloring. 27. Locality. 28. Order. 29. Calculation. 30. Eventuality. 31. Time. 32. Tune. 33. Artificial language.

GENUS III.—Reflective Faculties.

34. Comparison. 35. Causality.

In 1831, a Phrenological Society was formed in Paris. "Actuated by the wish," as stated in its Constitution, "to perform worthily the task bequeathed by Gall to his adopted country, the Phrenological Society calls upon all the friends of science and humanity to communicate the results of their observations, and lend their aid by all the means in their power." It is only astonishing that France so long delayed to profit by the labors of Gall, and to advance the impulse, which he first communicated, while already, and for a long time past, in England, in Scotland, in Ireland, in the United States, in India, and even in Italy,—that land of despotism, religious and political, Phrenology has been cultivated with the greatest ardor and the most encouraging success." *

The object of this society, as stated in its own prospectus, is to propagate and improve the doctrines of Phrenology. The society publishes a journal, "offers prizes, and bestows medals of encouragement.

"The society has a council of management, composed as follows: a cabinet council; a committee for editing the journal; a committee of funds.

"The cabinet council consists of a president, two vice-presidents, a general secretary, two secretaries for the minutes (proces verbeaux,) a treasurer, and a keeper of the museum (materiel) of the society.

"On the 22d of August, every year, the anniversary of the death of Gall, the society holds a general public meeting, in which the general secretary gives an account of the labors of the society, reads notices of the members which it has lost, and proclaims the names of those whom it has honored, announcing the prizes which it proposes to bestow.

"The society has tickets *(jetons)* of presence, bearing the portrait of Gall; and on the reverse, the title and year of the foundation of the society, with this motto—*Aux Progrés Des Lumieres.*

"The journal is published monthly. Its contents are to be, 1. An analysis of the proceedings of the meetings; 2. Memoirs and other papers which the society shall resolve to publish; 3. Articles sent for the journal; 4. A bibliographical bulletin. *M. Dannecy* was elected president, and *Casimir Broussais*, general secretary."

---

* Edin. Journal.

The Paris society, within the first year of its existence, consisted of one hundred and ten members, sixty of whom were physicians. Its members are of the highest respectability in Medicine, Philosophy, and Law, with some of both Chambers of the Legislature. We make reference to this Society, because its members have particularly honored Gall, in their constitution and proceedings.

It would be interesting to notice in this place the various societies and the progress of phrenology, throughout the civilized world; but we should exceed our present limits and design. That Phrenological Societies exist in most of the civilized nations, and are actively engaged in promoting the science originated by Gall, is an interesting fact—and it should lead those, who speak lightly of Phrenology, to reconsider their assertions, and to adopt a course of conduct more in accordance with modesty and justice.

The history of science, like the political history of nations, exhibits to us, at longer or shorter intervals of time, men of a superior order, who conceive a great idea, develop it largely, apply it boldly, and who leave behind them an indelible impression.* Such a man was Gall. That great discoverer is no more; but his genius survives in the science which he has created. We owe it to him, that henceforward we shall study the intellect and passions of man, the intelligence and instincts of animals, not entramelled in our views by blind superstitions, and metaphysical subtleties and prepossessions, but guided by the light of reason, and bound by no rule but the induction of pure philosophy. In the system of Dr. Gall, we find organic and physiological facts, which, for the first time, enable the naturalist to draw the line of distinction, between man and the lower animals, and by which man is demonstrated to be immeasurably the superior of the whole animated creation. Let us for a moment look back on the previous state of our knowledge of human nature.

The abstract study of man, as pursued by the ancients, has been the source of the most inexplicable contradictions, and pernicious consequences to the human race. That abstract philosophy, which, originating in the East, obtained so great a reputation in Greece, and was supported by so much zeal in the new capital of Egypt, abounded with lofty conceptions, and with the sublime creations of a poetical fancy. But to what did it lead? The unhappy fruits of its popularity were the most intolerant dogmatism, and desolating scepticism; while the system was rendered imposing, only by a cloak of mysterious importance thrown over it by the mad enthusiasm of its professors.

---

* Prospectus of the Paris Phrenological Society. See Edin. Jour. No. xxx.

It is difficult now to conceive, how, during the lapse of so many ages, so many attempts should have been made to arrive at a correct theory of the human mind, without the idea having ever occurred to any one of the celebrated philosophers of past times, to take *the brain* as the groundwork of their labors; that organ whose functions they were engaged in studying, but whose connection with those functions they never recognized. It is indeed true, that some of them took notice of the wonderful structure of the cerebral mass, and even undertook the dissection of the brain, to which they professed to attach a high degree of importance; but their labors were nearly fruitless, for to them the brain appeared but a single homogeneous mass, undivided into separate organs. "What is the use of observation," said Bichat, "if we know not the seat of the disease?" What, in the same way, could be the value of observations made by men, who not only were ignorant of the seat of the different faculties, but to whom the idea had not even occurred as possible, that each of those faculties might depend for its manifestation on a particular portion of the cerebral substance? Thus did these great anatomists make no real progress in the study of the human intellect and passions. Succeeding ages were not more successful in founding a system which should substitute close observation of facts for mere arbitrary hypothesis.

Down to the days of Gall, the inquirer into the nature of the human mind, began his investigations by a forced abstraction of his own faculties from the whole external world, and then turning his intellectual powers inwards upon his own mind;—in profound reflection, and in the total inaction of by far the larger portion of his faculties, he fixed in his memory a picture of what he fancied to be the various phenomena of cerebral activity. It was, with a crowd of ideas acquired in this manner, added to his previously received prejudices, that each philosopher, taking himself and his own individual constitution as the standard, formed his theory of the human understanding. Other philosophers, again, holding different views, sought for the origin of the human faculties in the impressions made on the senses, and these brought out ideas more distinct and positive; but, instead of regarding external sensations as merely necessary excitements to action of the internal organs of the different faculties, they considered the latter to result from the sensations themselves, and the brain was as yet vaguely believed to be, as a whole, the general seat of intelligence. As for physiologists, they were content to ascribe, in a general way, the origin of the passions to the influence of temperament, or to various viscera or organs of the body.

On the appearance of Gall, the science of mind assumed an entirely new aspect. Instead of studying the character and intellect of man in general, through the medium of himself, he began a series of observations upon individual men, and the lower animals. Instead of inventing an arbitrary system of faculties, Gall noted the relation between each organ, and the manifestations which he observed in the different individuals whom he examined; he distinguished between the general attributes of all or a variety of the faculties, and particular faculties themselves. Instead of inquiring whether an individual was well endowed with memory, imagination, judgment, or attention, (which are attributes common to a variety of intellectual powers,) he observed his capacity for any, and what employment of those faculties; whether he most easily remembered places, or words, or persons, and so on. In a word, instead of an abstract and *à priori*, Gall introduced an experimental or *à posteriori*, method of philosophising.

He studied what are called morals, in the same way that we study physics; and he gave to the physiological science of mind that happy direction, to which the other natural sciences owe those splendid results which so honorably distinguish the latter part of the last century, and, still more, the beginning of the present. The course which he has pointed out, is that which must be followed by all future philosophers, or they will infallibly continue to wander blindfold amidst error and absurdity.

But the system of Dr. Gall cannot be properly understood, until the inquirer shall know how to apply it with certainty. To attain this knowledge, a long and enlightened experience is absolutely necessary, and the results thence obtained are truly astonishing. Suppose that we wished to judge of the capacity of any individual, the general development of his head must first be considered, next the proportion which the anterior bears to the posterior regions, then the prominent parts in each region must be ascertained, and if a sufficient degree of experience has been acquired, the limits of the different organs should be specified. Thus, if it be known beforehand what allowance should be made for the influence of the viscera, the faculties and dispositions of the individual may be accurately determined. Such is the process that must be gone through before arriving at any thing positive, and Gall will be found to be a sure guide throughout. By this means, it will be understood why one individual is distinguished for his success in poetry, music, mathematics, logic, eloquence, or metaphysics; why another is impelled by the noblest of human passions, that of desiring to sacrifice even his life for the sake of doing good; why another is insensible to the existence of danger; why this man sacrifices every thing to the desire of being thought eminent in some accomplishment which, in reality, he does not possess, while that man would give up all besides to gratify his thirst of rule; and, finally, why some individuals can never attain to excellence, notwithstanding the greatest efforts, but remain forever condemned to a humiliating mediocrity. But this is not all. When we are thoroughly convinced, that those differences of disposition are the results of organization, we will congratulate the man whom nature has constituted favorably in that respect; and we will, on the other hand, regard with compassion him who has been less felicitously endowed. The same considerations will strengthen our feelings of indulgence towards the failings of our fellow-creatures, at the same time that they will show the importance of an enlightened education, which shall aim at counterbalancing the depraved dispositions of a child, by exercising those organs and faculties which may tend to destroy their effects, and which may even frequently turn them to the advantage of the individual who would otherwise have been their victim.

Such is the importance of Phrenology; but, at the same time, can it be said that the man whose genius has given it birth has succeeded in bringing it to perfection? Little attention, indeed, would, in these days, be paid to the man who should pretend to prescribe limits to any one of the sciences. No! Phrenology, like all the branches of medicine, is still imperfect; but, like them, it lays claim to stand on certain positive *data*, on fixed principles, and fundamental doctrines, which cannot be called in question, as being the results of testimony a thousand times repeated, of the whole united senses, elucidated by the simplest reasoning, and proved by the severest induction. So fully is this admitted to be the case, that now-a-days the study of Phrenology is no longer considered to belong exclusively to the physician, but begins to be looked upon as common to all the world.

Artists were perhaps the first to perceive the importance of our science; for it is a striking fact, that, in the models of antiquity, the forms of the head are very often found in the most exact relation to the faculties of the gods and men whom the chisel of the artist has handed down in sculpture to posterity. What sculptor will not comprehend, that, by means of Phrenology, he may be able at a single glance to obtain a key to individual character? and that, in creating an ideal subject, he must be guided by the same principles? Will it ever occur to him to give to the figure of a Hercules the forehead of an Apollo? or would he place the head of a demon of cruelty on a statue intended to represent a character of pure benevolence? Were an artist to commit such an error, he would be considered a man of superficial mind; and though, as a mere workman, he might be more or less rewarded for his skill, he would be treated as one who had not an idea of the true nature of his art, and of accomplishing it. The same remarks are equally applicable to the kindred art of painting. The painter cannot too strenuously pursue the study of Phrenology: for he has only an even surface on which to delineate his objects, and he may fail in giving them the necessary expression, by neglecting those traits, which, however slight, are characteristic and necessary to bring out the distinguishing peculiarities of his subject. Moreover, Phrenology recognises a uniform relation, an intimate connection between the habitual attitude of individuals and their predominant dispositions; and the painter who knows how to appreciate this influence of the cerebral organization upon the movements of the body, will be distinguished for the naturalness of the deportment and action of all his personages; while he who is a stranger to Phrenology runs a continual risk of falling into the grossest inconsistencies. What would be thought of a medallion, in which the predominating organs of its subject were not more strikingly developed than the rest? In this way, to all those arts which profess to present the exact image of man to the eyes of his survivors, Phrenology is most useful, and will in future be considered indispensable.*

It is now beginning to be perceived also, that, without physiology, the philosophy of mind cannot advance a single step; that a thorough knowledge of organization in general, and of that of the brain in particular, must be the foundation of all inquiries of that nature; that every attempt to explain intellectual and moral phenomena, which shall not take the principles of Phrenology for its basis, will inevitably be fruitless. On this subject all are agreed, spiritualist as well as physiologist, for, even according to the views of the former, the brain is a condition necessary to the manifestation of both intellect and sentiment, while, according to the latter, it is the vital organ of the intellectual and moral powers. It were out of place here to attempt to decide upon the superiority of either of those methods of reasoning; suffice it to say, that both are deeply interested in advancing the progress of Phrenology. Besides, this science explains the cause of this very difference of opinion on matters which, ever since man began to think and reflect, have divided the world. We cannot at the same time help noticing here, the sure consistency of the ideas furnished by Phrenology on this subject. How unerring and elevated are the views of the philosophical observer, who, contemplating man in the midst of his fellow-creatures, recognises and traces the reciprocal actions and reactions of different organizations! Should such a philosopher ever be called upon to give laws to his country, he will, far from setting at nought the uniform cravings inherent in certain organizations, be careful to avoid all excitements to infraction of municipal law arising from demanding of man more than his organization is capable of, and from sacrificing some of the faculties to the interests of some others: he will frame laws which shall be adapted to the real wants of the community, according to the variety of their nature, and not founded on false views of the equality and uniformity of the intellectual and moral faculties; for he will be familiar with those varieties of organization, from which the differences of intelligence and resource arise.

---

* From ignorance of these principles, the ancients have, in some of their master-pieces, fallen into errors which are now considered monstrous, such as the extreme smallness of the head of the Venus de Medicis. From the same cause, and from fear of failing in certain arbitrary proportions, the head of Napoleon has been reduced in size, without regard to the existence of an extraordinary cerebral development, of which Phrenology alone is capable of comprehending the importance, and appreciating the beauty. The ancients, when they concealed the enormous size of the head of Pericles, had the same end in view as the moderns, but were more faithful imitators of nature.

Phrenology will be consulted, also, in the preparation of a penal code; for the nature of the punishments to be inflicted ought to bear a relation to the possibility, more or less admitted, of correcting and ameliorating the guilty. A great latitude will thus be allowed, in order that he whose organization does not indicate his propensities to be incurably strong, may one day, when their influence shall have been abated by well-directed training, be restored to his place in that society, of which he shall be no longer unworthy; whilst the unfortunate being, in whom the excessive and fatal preponderance of certain organs over those of the intellect, or the almost total absence of the latter, shall leave no hope of improvement, will be kept separate from the former class of moral patients, and will be prevented forever from returning into that society of which he can only be the pest.

But the department in which Phrenology is most necessary, and is destined to produce the happiest results, is that of Education. Here the extent of its application will be prodigious. How should that science fail to be of primary importance to a teacher, which should enable him to turn the studies of his pupils into the proper channel, and to have a thorough knowledge of their characters ; which should inform him with certainty that such a one has a decided talent for drawing, such another for languages, a third for calculation, and a fourth for poetry; and which should warn him, that it would be a loss of time to urge the progress of a fifth in a particular direction! How many tears would not be spared to childhood! How many vexations would not the teacher himself escape! And who will presume to foretel the results of a system of education, in which, by proper direction, those dispositions shall be turned to the advantage of an individual, which would otherwise have been the cause of his inevitable destruction? When a child is born with a particular development of brain, if he be left altogether to himself, he will become cruel and ferocious, and perhaps commit murder. What does an able instructor do in such a case? He endeavors to place beyond the reach of his pupil all objects calculated to call into action the organs of his most dangerous propensities, and to present to him only those of an opposite tendency. He strongly calls his attention to the charms of an amiable disposition, to the affection which it generates towards itself, to the praises which it calls forth, and, above all, to the internal complacency, with which it never fails to bless its possessor. Such representations, exhibited to the infant's mind incessantly, and in a thousand different ways, incline him to make an effort at amiability. He is praised for his first virtuous acts ; he is skilfully encouraged to persevere in the same line of conduct. Even accidentally, and as opportunity offers, he is made to feel, by some striking example, the melancholy and deplorable effects of indulging criminal passions; and, by assiduous and long continued care, the result, after years of perseverance, is, that he becomes a man of courage and coolness, who is not to be diverted from a useful enterprise by feelings of too great sensibility, but who, actuated by those principles of virtue which have gradually become his constant guide, will refrain from indulging in any act of cruelty.

Such is the happy influence which Phrenology will exercise over the development of childhood ; but is not education also useful at all ages and at every stage of life? Youth and mature age are not necessarily incorrigible. The attempt is then, without doubt, more difficult, but still success is not impossible. Let us suppose a man to be of a passionate temperament: Phrenology informs him that there exists within him a disposition, the result of organization, hurrying him blindly on to all the violence of passion. If, besides, he be endowed with reason, that is to say, if he be not deficient in the intellectual organs, will he not keep himself on his guard against the causes which inflame his passion? Knowing that the chief cause exists in his own constitution, will he not strive to yield less and less to the influence of causes which are external? And will he not, consequently, succeed at last in weakening his own tendency to paroxysms?

It would require much more than our present limits, to enter fully here into the services which Phrenology will be the means of rendering to human society, as soon as it shall be universally known and appreciated as it ought; all that we aim at, is, to call attention to the nature and importance of its assistance, in order that all those who are actuated by a desire of doing good, and who consider it a duty to contribute to the amelioration of our social condition, and of the human race in general, may concentrate their exertions in maintaining, spreading, and bringing it to perfection. EDITOR.

ADVERTISEMENT.

It is three years since I published my large work on the anatomy and physiology of the brain. This magnificent work soon found its way into the principal libraries of Europe. The public were sure of finding in it, the real ideas of the founder of the physiology of the brain, and it contributed its potent influence to destroy the prejudices which still reigned respecting the nature and tendency of my researches.

I had come to the conclusion, that it was necessary, in the first instance, to publish a work worthy of the importance of the subject, which would make known to the learned world the whole extent of my discoveries, and at the same time would afford the means of putting them to the ordeal, and of multiplying and perfecting them.

This purpose not only required many discussions on subjects altogether new, but, likewise, a great number of portraits, and designs of brains and skulls, both of men and animals.

The execution of this vast plan, raised the price of my work above the means of most persons, to whom my labors ought to prove of the most utility; and I was therefore urged from all quarters to publish an edition, which in its price might come within the reach of the public in general.

In the fulness of my conviction, that my labors may have the happiest influence on moral institutions, in the treatment of cerebral diseases, particularly mental alienation, &c., I feel it my duty to neglect no means of extending the knowledge of them. Notwithstanding the great number of general views, small works, articles in journals, analyses and criticisms by many of my most distinguished pupils, I still meet, in almost all the works of our modern authors, either erroneous and defective notions, a total ignorance, real or affected, or a singular reserve and apprehension in passing judgment on what is most essential in my doctrines—the incontestible value of facts. They can no longer refuse to admit the principles to which these same individual observations have led me; but they find it too laborious to resist experience itself, and they conceive that they have done enough for the progress of the science, by suspending, with an air of complaisance or modesty, its definitive decision.

It is not yet time, therefore, to abandon the research and the multiplication of observations to the reader alone; it is still necessary to conduct the observer by the hand, to show him the multiplied modifications of a large number of facts, and thus to initiate him in this new field of observation. I shall concede no excuse to those who, through prejudice or self-sufficiency, neglect what is the most useful and essential, the experimental part of the physiology of the brain.

It is for the same reason, that this edition does not offer to the reader a simple sketch of my doctrines,—an extract merely from my large work. It includes the entire text, with the exception of the descriptive anatomy of the nervous system in general, and of the brain in particular, of which I propose to make a distinct work, as soon as I shall be able to profit by what has been published on these two objects of comparative anatomy, since my first edition. I shall, in this work, explain the anatomy only so far as it is indispensable for the understanding of the physiological propositions. For this omission, however, I shall atone by several corrections; I shall add new observations, answers to new objections, and a systematic review of the most important treatises, which have appeared since the publication of my large work. But not to leave the latter in any respect inferior to this, I shall join to it a supplement, which will be wholly devoted to these improvements.

As it has been necessary to omit the plates, I shall refer to them by the same figures and the same letters with which they are marked in my great work, in order that those of my readers, who are in the vicinity of extensive libraries, may be enabled to consult them. In this manner, I apprehend, the various and multiplied materials of this whole work will be connected in the most natural manner.

The object of all my researches is to found a doctrine on the functions of the brain. The result of this doctrine ought to be the development of a perfect knowledge of human nature.

The possibility of any doctrine, in relation to the moral and intellectual function of the brain, supposes

1. That moral and intellectual faculties are innate.
2. That their exercise or manifestation depends on organization.
3. That the brain is the organ of all the propensities, sentiments, and faculties.
4. That the brain is composed of as many particular organs as there are propensities, sentiments, and faculties, which differ essentially from each other.

And as the organs and their localities can be determined by observation only, it is also necessary that the form of the head or cranium should represent, in most cases, the form of the brain, and should suggest various means to ascertain the fundamental qualities and faculties, and the seat of their organs.

The demonstration of these principles will be followed by the exposition of the moral qualities and intellectual faculties, by the history of their discovery, their natural history, the seat of these organs in the brain, the form which these organs give to the head, &c.; by a treatise on national heads; on the physiognomy, pathognomy, and philosophy of man, and on several very important questions, the solution of which naturally flows from my doctrines taken together.

When I speak in the plural number, I include with myself Dr. Spurzheim, who, having accompanied me in my travels, made a great part of the observations, referred to, in common with me.

INTRODUCTION.

WHEN any discovery or new doctrine is announced, the question is usually asked, how the author conceived the first idea?

Although the same experiments may not lead different individuals to the same meditations, yet when these same experiments are collected and presented in order, they give rise to ideas in the mind of the reader so analogous to those of the author, and the discovery often appears to him so natural an event, that he is ready to exclaim, "Why had I not made it long since?"

This is precisely what has happened with respect to my doctrine, the origin of which rests on very ordinary facts. Most of those who have heard my lectures have said to themselves, and I doubt not but most of my readers will say likewise, "How is it possible, that these truths have been so long overlooked?"

From my earliest youth, I lived in the bosom of my family, composed of several brothers and sisters, and in the midst of a great number of companions and schoolmates. Each of these individuals had some peculiarity, talent, propensity, or faculty, which distinguished him from the others. This diversity determined our indifference, or our mutual affection and aversion, as well as our contempt, our emulation, and our connections. In childhood, we are rarely liable to be led astray by prejudice; we take things as they are. Among our number, we soon formed a judgment, who was virtuous or inclined to vice; modest or arrogant; frank or deceitful; a truth-teller or a liar; peaceable or quarrelsome;

benevolent, good or bad, &c. Some were distinguished by the beauty of their writing, some by their facility in calculation, others by their aptitude to acquire history, philosophy, or languages. One shone in composition by the elegance of his periods; another had always a dry, harsh style; another reasoned closely and expressed himself with force. A large number manifested a talent or a taste for subjects not within our assigned course. Some carved and drew well; some devoted their leisure to painting, or to the cultivation of a small garden, while their comrades were engaged in noisy sports; others enjoyed roaming the woods, hunting, seeking birds' nests, collecting flowers, insects, or shells. Thus, each of us distinguished himself by his proper characteristic; and I never knew an instance, where one who had been a cheating and faithless companion one year, became a true and faithful friend the next.

The schoolmates most formidable to me, were those who learned by heart with such facility, that, when our recitations came, they took from me the honors, which I had gained by my compositions.

Some years afterwards I changed my abode, and I had the misfortune still to meet individuals endowed with a surprising facility for learning by heart. It was then that I remarked, that all these resembled my former rivals in their large prominent eyes.

Two years afterward I went to a university; my attention first fixed itself on those of my new fellow-students who had large prominent eyes projecting from the head. Such generally boasted of their excellent memories, and though in many respects by no means the first, all of them had the advantage of me, when the object was to learn promptly by heart, and to recite long passages with correctness.

This same observation having been confirmed to me by the students of other classes, I naturally expected to find a great facility of learning by heart, in all those in whom I should remark the prominency of the eyes. I could not believe, that the union of the two circumstances which had struck me on these different occasions, was solely the result of accident. Having still more assured myself of this, I began to suspect that there must exist a connection between this conformation of the eyes, and the facility of learning by heart.

Proceeding from reflection to reflection, and from observation to observation, it occurred to me that, if memory were made evident by external signs, it might be so likewise with other talents or intellectual faculties. From this time all the individuals who were distinguished by any quality or faculty, became the object of my special attention, and of systematic study as to the form of the head. By degrees, I thought I could flatter myself with having found other external characters, which were constantly met with in great painters, musicians, mechanics, and which consequently denoted a decided propensity to painting, music, the mechanical arts, &c.

I had in the interval commenced the study of medicine. We had much said to us about the functions of the muscles, the viscera, &c., but nothing respecting the functions of the brain and its various parts. I recalled my early observations, and immediately suspected, what I was not long in reducing to certainty, that the difference in the form of heads is occasioned by the difference in the form of the brains. But, I never went so far, as to imagine that the cause of the moral qualities or the intellectual faculties, resided in such or such a place in the bones of the cranium.

Was it not then very natural to expect, that in discovering and demonstrating, in men endowed with remarkable propensities or talents, the existence of some external signs of their qualities, this discovery would lead me to a knowledge of the functions of the brain, and of its parts? The hope of having it in my power to determine, one day, the relation of the moral and intellectual forces with the organization, the hope of founding a physiology of the brain, was so powerful an encouragement, that I could not but form the resolution to continue my researches, until I had either attained my end, or was convinced of the impossibility of reaching it.

This beautiful enterprise would not have been difficult, if, entirely at liberty, I had been abandoned wholly to myself and to nature. But, it too often happens, that the more scientific one becomes, the farther he departs from the simple truth; and this was precisely what I experienced. My imperfectly established conviction was shaken, in proportion as I gained new information, or rather, as I heaped up errors and prejudices.

Philosophers assure us, said I to myself, that all our faculties come from external sensations, or, at least, that all men are born with equal faculties, and that the differences between them, are owing either to education, or to accidental circumstances. If it be so, there can be no external signs of any faculty; and, consequently, the project of acquiring in this manner a knowledge of the functions of the brain and its parts, is a mere chimera.

But I always returned to my first observations. I knew that my brothers and sisters, my companions and school-fellows, had received nearly the same education, or rather, that in general, they had received none. All had grown up in the midst of the same circumstances and analogous impressions. I also saw that ordinarily those whose education had been carefully watched, to whom the instructors had given lessons in private, were, in fact, behind others in capacity.

We were often accused of aversion to study, and of want of zeal; but many of our number could not, with the best disposition, and the most determined efforts, raise themselves in certain points, even to mediocrity, while in others, they surpassed their school-mates without effort, and almost, it might be said, without perceiving it. In fact, our masters did not give much credit to the system of the equality of the faculties, for they thought proper to exact more of one scholar, and less of another. It often happened to them to speak to us of our natural gifts, of the gifts of God; and they exhorted us in the words of the gospel, telling us that each would render an account in proportion to the talents which he had received.

Add to this, that I observed both in tame and wild animals, of which I had always a considerable number about me, differences of faculties and of character, as in men. One dog was almost of himself skilful in the chase, while another, of the same race and the same litter, could be trained only with great difficulty; one was very cross, and quarreled with all other dogs, while another was very mild and peaceful; this one could not find his way back even from a small distance; while that, on the contrary, though very young, returned, after being lost, from very distant places. Such a bird listened with great attention to an air which was played before him, and learned it with admirable facility; another, of the same covey, and fed and treated in the same manner, paid no attention to it, and sung nothing but his own note. One pigeon was the faithful mate of his companion, and in spite of repeated trials, could not be made to couple with another female; while another pigeon, on the contrary, stole into all the dove-cotes, to gallant and carry off females that were strangers to him.

In all these cases, I could not suppose either evil inclinations, the influence of education, or different impressions on the external senses. I was consequently obliged to conclude, that the propensities and the faculties, both of men and animals, were innate.

But then arises this question: On what is this innateness founded? Does it belong to a peculiar principle, a spiritual principle, the soul? and this soul, does it exercise its faculties freely and independently of organization; or, is the exercise of its faculties subordinate to certain material conditions? or, in fine, are these faculties the result of organization itself?

If this principle, this soul, enjoys the exercise of its faculties independently of organization, it is, together with all its functions, beyond the sphere of the physiologist; the metaphysician and the theologian alone will arrogate the power of pronouncing on its nature. But I will submit the following questions to those, who pretend, that this principle is independent of organization.

Is this principle the same in both sexes? Does it change its nature in infancy, childhood, puberty, manhood, old age, decrepitude? Is it at all modified according to the quantity and quality of the aliments by which the body is nourished—according as digestion is easy or laborious? What becomes of this independence in sleep, in drunkenness, in apoplexy, in acute fevers, in effusions, excrescences, inflammations and ulcers of the brain and its envelopes, in derangements of the functions of the liver and stomach? Every one knows, that such circumstances interrupt, suppress, exalt—alter, in a thousand ways, the functions of the soul.

Ought not these facts then to lead us to the conclusion, that the exercise of our propensities and faculties, whatever the principle we adopt, is subjected to the influence of organic conditions.

Who then will deny, that the propensities and the faculties are within the domain of the physiologist? It is for him to examine these material conditions, these organs of the soul; it is for him to determine whether the greater or less perfections of these organs, induces a more or less energetic manifestation of their functions; it is for him to seek to what point and under what conditions, the most favorable development of the cerebral organs impresses visible or palpable signs on the external surface of the head. It is, in fine, the task of the observing physiologist to examine what are the parts of the brain affected by a determined propensity, sentiment, talent.

For a long period I continued my researches as I had commenced them, urged on solely by my fondness for observation and reflection. Abandoning myself to chance, I gathered for several years all that it offered me. It was not till after having accumulated a considerable mass of analogous facts, that I felt myself in a state to range them in order. I perceived successively the results, and at length had it in my power to go to meet observations and to multiply them at pleasure.

But again, the more progress I seemed to have made, the more every thing appeared to conspire against me. Here, a phenomenon supposed something utterly at war with the dogmas of physiologists; there, a consequence presented itself which refused to harmonize with the opinions of philosophers; and here, many fancies were raised respecting the dire influence, which my researches were to exert on morality and religion.

In this continual struggle of facts with received notions, what was to be done? Was I to listen to the simple voice of nature, or, to the arrogant counsels of reigning doctrines? Was I prepared to interpret rightly the language of nature? I had so often deceived myself—who could answer for me, that I should deceive myself no more? Was it not a ridiculous pretension for a young man, to hope that his efforts would reveal to him things, which for ages had escaped the researches of the greatest observers? On the other hand, supposing that my labors were not to be totally vain, was it not an imprudent and rash enterprise, to oppose opinions so long established in the various sciences; to contradict the anatomists, physiologists, philosophers, metaphysicians, lawyers, &c.?

How many times have I probed my conscience, to determine whether a vicious propensity, unknown to myself, did not guide me in these researches? But, as I could not have foreseen whither they would lead me, no prospect of reputation could have influenced me in pursuing them; and beside, was it the best mode of attaining fame, to venture to announce extraordinary propositions, destitute of probability, and which, if false, must be proved such, at no distant period?

The love of truth, and a conviction of the purity of my views, could alone have inspired me at each step with the confidence and the boldness, necessary for my task. When one has discovered by experiment a series of incontestible truths, he meets all possible doubts and objections with courage. Each doubt resolved, is a difficulty removed; each objection refuted, is an error over thrown. In this manner I soon succeeded in removing the obstacles, and in peaceably pursuing my course. I especially familiarized myself, at an early period, with the following observations, which ought to be deeply engraved in the mind of all observers and of all readers.

The more important a new view may be, and the more nearly the doctrine is likely to touch the affections and interests of men, the greater care should be taken by the author to avoid every kind of rash and arbitrary assertion; but, the moment he announces the truth, he ought to be assured beforehand, that he can produce only good. Let these truths concern the nature of man or the nature of brutes, let them unfold the physical or mental nature of living beings, he will be always able to appeal to the harmony and order, which reign in the universe. Is it not the same Creator who has made the moral and the physical world? Can physical truth be in opposition to moral truth? If certain men cry out at the danger, with which a real discovery threatens an established doctrine, they render this doctrine singularly suspicious; for, either it is false, or we may justly accuse the weakness and ignorance of the pretended interpreters of God's works.

Nothing can resist the power of truth. Now if the truth remains, and public writers or even governments attach to it pernicious consequences, who does the mischief? On the other hand, is it not at once impious and absurd to maintain that laws and constitutions ought to be founded on imposition, in order to insure the happiness and tranquillity of men?

"Let us respect truth," you will tell me; "but how are we to know that your doctrine of the functions of the brain, is the truth?" Truth, as well as falsehood, has its proper physiognomy. This doctrine owes its birth to incontestable facts; these facts have revealed the general laws, in virtue of which they take place; they have led to principles which prove themselves, independently of the facts from which they are deduced: each new fact, whether furnished by chance, or called forth by a mind eager for experiment, becomes a new confirmation of it: this doctrine has introduced clearness, confidence, harmony and stability, where before there reigned only obscurity, vacillation, contradiction, versatility; it explains moral phenomena, and the modifications of these phenomena at different ages and in the two sexes, in different states of health, and disease, and in different nations: in man and in animals, it reveals to us the secret of the diversity of instincts, propensities, faculties, as well in species as in individuals: from the polypus to man, it demonstrates to us from fragment to fragment, the material causes of the gradual perfection of their intelligence, of which, descending in the opposite direction from man to the polypus, and returning piece by piece, it produces the diminution and the degradation; the numerous propositions of this doctrine, destroying the most accredited errors, naturally sustain and strengthen each other: it is eminently fruitful in application to human affairs, to education, to the arts and sciences, to the study of history, to medicine, to philosophy, morals, criminal legislation, &c.: it opens to the observing naturalist, a boundless field for meditation. If these are the characteristics of the truth and utility of a doctrine, I am certain, that we shall be more and more struck with the truth and utility of the physiology of the brain, in proportion as it is submitted to more rigorous and multiplied tests.

Strongly impressed with these ideas and supported by these motives, I turned all my attention to the finding of the means which, in the least possible time, would enable me to accumulate the greatest number of facts. I shall speak of these means, when I treat of the propensities and faculties, and their organs, particularly. I will here give a single one, which presented itself when I least thought of it, and which greatly contributed to perfect my works.

The first day of the year 1805, my father, who resided at Tiefenbrunn, in the Grand Duchy of Baden, wrote me these words: "It is late, and night cannot be far distant: shall I see you once more." Nothing but such an invitation, joined to the ardent desire which I cherished in my bosom of again seeing my beloved parents, after an absence of twenty-five years, could have induced me to leave my friends and my patients, for a few months. I wished, too, to avail myself of this opportunity to communicate my discoveries to the learned men in the north of Germany. That my interview with them might not terminate in propositions and discussions without proof, I took with me a part of my collection. I was always convinced that, without these visible and palpable proofs, it would never be possible to fight victoriously against so many preconceptions, prejudices, and contrary opinions, as I must necessarily meet.

I experienced, every where, the most flattering reception. Sovereigns, ministers, philosophers, administrators, artists, seconded my design on all occasions, augmenting my collection, and furnishing me every where with new observations. The circumstances were too favorable, to permit me to resist the invitations, which came to me from most of the universities. By this means my journey was lengthened far beyond the term, which I had first fixed; but there likewise resulted so many discussions of my doctrine, public and private, that it arrived at a degree of maturity, which few founders of new doctrines have been able to attain during their lives.

This journey afforded me the opportunity of studying the organization of a great number of men of eminent talents, and of others of very limited capacity, and I had the advantage of observing the difference between them. I gathered innumerable facts in the schools, and in the great establishments of education, in the asylums for orphans and foundlings, in the insane hospitals, in houses of correction and prisons, in judicial interrogatories, and even in places of execution: the multiplied researches on suicides, idiots, and madmen, have contributed greatly to correct and confirm my opinions. I have laid under contribution several anatomical and physiological cabinets; I have submitted antique statues and busts to my examinations, and have compared with them the records of history.

After having used, for more than thirty years, such diversified means, I no longer feared the danger or the reproach of having precipitated the publication of my great work. I had more reason to apprehend, that the great number of proofs I had furnished in support of each of my propositions, instead of being satisfactory, would prove to the great body of my readers actually alarming. As this volume will be particularly devoted to the exposition of the moral part of the physiology of the brain, the reader may ask, if a physician has the right to apply his knowledge to the study of morals, the improvement of education, that of houses of correction, of prisons, of the penal code, of malefactors, &c. No one disputes, that all institutions and all laws ought to have for their basis, the nature of man and the wants of society. Now, to whom does human nature reveal itself more openly, and with less reserve, than to the physician? Who has more occasion than the physician, to see men in a state of absolute unreservedness? Who is more obliged to study their physical and moral character, and the influence of one on the other? Who is better prepared for it, by accessory knowledge and by the study of natural sciences? Finally, who remarks and knows how to appreciate, as well as the physician, the influence of food and drink, of temperature, of a critical period approaching, or already present, of temperament, climate, affections, passions, diseases, &c., on the determinations of men? The physician alone by night and day is witness of the most secret events in families, and of their most intimate relations. Virtuous or vicious, the man who suffers and struggles against death, can with difficulty conceal from the physician, his real character. Who would not wish to have for a friend the man to whom he confides his wife, his children, himself? The man who, at every hour, must stand ready to devote himself absolutely to his patients, and perhaps to meet death at their bedside? It is to such a friend, to whom all that relates to human nature is so well known, that men unfold the hidden windings of the heart; they feel obliged to discover to him the weak points and eccentricities, which may guide him more surely in his judgment. Who, like the physician, can trace that extremely delicate line of demarcation which distinguishes immorality, wickedness, and crime, from certain derangements of the mind, so often masked, from imbecility, from madness? Ought not circumstances so numerous, and so favorable, give to the physician profound and certain views of human nature?* Let this same physician be endowed with the genius of observation; let him be familiarized with the origin and nature of the propensities and the faculties of man, with the excesses and abuses with which these same propensities and faculties continually menace him, and you will have the best qualities to furnish valuable results, in all cases where the object is to direct sagaciously, and to judge equitably the actions of men. Moses, that great legislator, fixed his principal attention on the physical character of men. Is it not to physicians that men are indebted for an infinity of excellent establishments of police, and for good laws? Since some great men have given several complete treatises on medical police and statistics, as well as on legal medicine, how many instructors and moralists are there, who borrow from medicine those means, which they employ with the happiest results.

---

* The truth of these remarks must be obvious to all. The sphere of the physician is great and important, and if he would make use of his frequent opportunities to observe nature as modified by disease, the result of his observations would be a valuable contribution to philosophy. We do not mean simply those symptoms which have reference to the physical system only—but those mental manifestations which change with the different stages of disease.

The character of the mind of the patient, when in health, should be first ascertained, and his most prominent phrenological developments. His concern, or indifference for life, or friends, or wealth, or business, should be noticed and registered.

We would recommend the keeping of a phrenological journal for every patient; at least, noticing the most prominent developments.

The physician has often to encounter the prejudices of his patients, or their attendants—and a knowledge of their peculiar characteristics would enable him to provide for them. He could judge more accurately of symptoms, by being able to distinguish between the effects of physical prostration, or apparent improvement, and the mere affections of the mind.

Large or small Hope, or Mirthfulness, or Cautiousness, would change materially, many of the symptoms which physicians uniformly regard as of consequence.

When encouragement becomes necessary to excite the patient, appeals should be made to those faculties which are predominant. Irritableness of temper, however, should be met with the greatest possible kindness. We cannot express too strongly our disapprobation of those medical men who treat their patients harshly, and more like brutes than human beings. They administer to their bodies, not appearing to know that they have any thing to do with their minds. A cheerful communication between the physician and patient, is followed with the happiest effects.—[Ed.]

If all which I have mentioned, is not yet accomplished, it is because, neglecting the useful example of the ancient sages of Greece, men have separated from each other too far, physiology, medicine, education, morals, legislation, instead of appreciating their mutual relations; and still more because there are few philosophic physicians, who can embrace the whole extent of their sphere of activity, and elevate themselves to the full dignity of their rank.

MORAL PART.

OF THE PHYSIOLOGY OF THE BRAIN.

SECTION I.

OF THE NATURE OF MAN, AND OF THE DIFFERENCE BETWEEN VEGETABLE AND ANIMAL LIFE.

THE phenomena which takes place in man, from the moment of his conception to that of his death, taken together, constitute the nature of man.*

All these phenomena are perhaps the result of one single and uniform principle; but they manifest themselves under forms and conditions so different, that to acquire a clear and detailed knowledge of them, we must examine them under points of view, as various as these forms and conditions themselves; we must study man in all his relations, in all his points of contact with entire nature.

The greatest obstacle which has ever been opposed to the knowledge of man's nature, is that of insulating him from other beings, and endeavoring to remove him from the dominion of the laws, which govern them.

---

* The word phenomenon means more properly the appearance of a thing or quality, than the principle which constitutes the nature of it. To retain the word phenomenon, we should modify the sentence thus: The phenomena which takes place in man, from the time of conception even to that of his death—constitute the only data from which the nature of man can be inferred.—[ED.]

We may, without inconvenience, neglect the relation of man to unorganized nature. Let us leave to the cultivator of natural history, the care of determining the laws of contractility, elasticity, weight, attraction, crystalization, the action of capillary tubes, electricity, &c. But, it is impossible to avoid an endless confusion of words and notions, and not to lose ourselves in the most absurd explanations, unless we distinguish the functions which man has in common with the vegetable kingdom, from those which are peculiar to him as an animal.

The vegetable kingdom offers us organization infinitely varied. We recognize in it the act of fecundation, assimilation, nutrition, growth, a species of circulation, secretions and excretions, irritability, and an elective force, or a faculty of placing itself in relation with objects out of itself; of choosing, for example, the most suitable nourishment; of attaching itself to surrounding objects; of avoiding or seeking the light; of closing the leaves or flowers by day or by night, &c. All these operations take place from the influence of a blind necessity, without sensation, consciousness, or will. For this reason we assign to the vegetable kingdom a life, but a life purely organic, automatic, vegetative; and as all this passes in the interior of the organism itself, and the individual takes no account of the action of external things, it has been thought proper to call it an internal life. Those who find the supposition of a soul, necessary to explain these phenomena, give it the name of a vegetative soul.

The same functions are exercised in animals and in man. Fecundation, assimilation, nutrition, growth, secretions and excretions, &c., are performed in them equally by the laws of organization, by a blind necessity, without perception, consciousness, or will. Man and animals, therefore, share the vegetative, automatic life, with the vegetable kingdom. But they likewise enjoy functions of a more elevated and essentially different order; they possess the faculty of sensibility, of perceiving impressions, external and internal; they have the consciousness of their existence; they exercise voluntary movements, and the functions of the senses; they are endowed with mechanical aptitudes for industry; with instincts, propensities, sentiments, talents; with moral qualities and intellectual faculties.

As soon as one or more of these functions take place in any being, it is considered as possessing animal life. And as men have thought, that all these faculties were the product of impressions on the senses, it has been called the life of relation, or external life.

It is therefore with reason, that the parts of the body have been divided into organs of vegetable life, and organs of animal life.

Those readers who are not versed in the study of natural history, will here ask me, What is the organ, or what are the organs of animal life? By what means has nature effected all its phenomena, from simple sensation to the most complicated faculties, moral and intellectual?

These means, these organs, form a peculiar apparatus, of which vegetables and zoophytes are still deprived: it is the nervous system. The nerves alone are the instruments of sensibility, of voluntary movement, of the functions of the senses. Without a nervous system, there is no *mechanical aptitude*, no instinct, no propensity, no sentiment, talent, moral quality, or intellectual faculty; no affection, no passion.

Each particular order of the functions of animal life is effected by a peculiar nervous system, by particular nerves, distinct from the other nervous systems, and from other nerves. There is a peculiar nervous system for the viscera, and for the vessels principally destined to vegetable life; there is a nervous system, the instrument of voluntary movements; there is one which belongs to the functions of the senses: finally, the noblest in animals and in man the most considerable, the brain, has all the others under its dominion; it is the source of all perception, the seat of every instinct, of every propensity, of all power, moral and intellectual.

In order to proceed from the simple to the compound, I shall give my readers some views of the nervous system, with which the animal character commences, but the functions of which belong even more to vegetable than to animal life.

In all animals placed in the scale of living beings above the zoophytes, that is, in all animals properly so called, there exist one or more masses of a gelatinous substance, very vascular, of different color and consistence, which give rise to white threads, called nervous filaments. These filaments unite and form nerves, nervous cords, which go to this or that viscus and there spread themselves. These masses of gelatinous substance, called ganglions or plexuses, these sources of nervous filaments and the nerves formed from them, are more or less numerous, according to the number of parts or viscera with which the animal is provided, and for which they are destined.

These nervous apparatuses exist, even in animals which have neither spinal marrow nor brain; consequently, their origin and their action in these imperfect animals are independent of all other nervous systems.

They are the type of the nervous system of the viscera, of the abdomen, of the chest, and of the vessels of animals of the most perfect organization, and of man.

As long as there exists in an animal of the lower order, a sole internal part, and a sole ganglion with its nervous filaments, this nerve acts in an insulated manner; but as soon as, in a single individual, the existence of several organs renders several ganglions and several nerves necessary, these ganglions and these nerves ordinarily enter into communication by means of filaments, passing from one to the other.

There are then as many of these ganglions and of these different nerves, as there are different viscera; and as each viscus is destined to a particular use, to digestion, to the secretion of bile or semen; as each viscus has its specific irritability, these ganglions and these nerves must necessarily have their interior structure and their functions, differing from each other.

It is probable, that in animals, even of the lowest order, this nervous system is endowed with sensibility; but in man, and the higher animals, it is, like the spinal marrow and the nerves of the senses, entirely under the dominion of the brain. In a state of health, the viscera and the vessels execute their functions without any volition on our part, and without our having the slightest consciousness of the fact: the intestines are in fact in continual motion; they choose the nutriment which suits them, and reject heterogeneous substances; they form the secretions and the excretions.

But, we have seen that vegetables present to us similar phenomena: the capacity of being stimulated, of reacting against stimulus, a character of irritability, ought not to be confounded, as most physiologists do confound it, with the faculty of *perceiving* a stimulus, of having a consciousness of it, of feeling it. The perception, the consciousness of an irritation, of an impression, are inseparable from the nerve of sensation. Sensation, or organic sensibility without consciousness, is a contradiction in terms, but a contradiction very sagely preserved and professed in our schools. Sensibility, or the faculty of feeling, constitutes the essential character of the animal. When the changes produced by an impression take place without consciousness, they must be considered the result of irritability, and as belonging to automatic life; but when changes take place with consciousness, with perception, with sensation, this act of consciousness, of perceiving, belongs to the animal life.

"But," you will say, "admitting that, in a state of perfect health, we have no consciousness of what passes in the heart, stomach, liver, &c., still we feel hunger and thirst, and the need of certain evacuations; we experience trouble, uneasiness, and pains, in the intestines, &c., and in general it would be difficult to find a part of the body, the bones, tendons, and even hair, not except-ed, which may not, under certain circumstances, transmit sensations, and consequently become an organ of animal life. How happens this?"

We have seen, that the ganglions and nerves of the viscera and vessels, communicate together; they send several filaments of communication to the spinal marrow, and this is immediately connected with the brain. It is thus that all the impressions on the other nervous systems are transmitted to the centre of all sensibility, and that the influence of all the nerves on the brain, and of the brain on all the nerves, is established. It is for this reason, that the nervous apparatus of the chest and abdomen has received the name of sympathetic nerve, or, because its branches of communication take their course between the ribs to the spinal marrow, the intercostal nerve. Besides these means of reciprocal action and reaction, several nerves of the spinal marrow and of the head, such as the hypoglossal nerve, the glosso-pharyngeal, the abductor, the facial nerve, unite themselves with the sympathetic.

The organs of both lives can only perform their special functions in proportion to their development, to their organic function. Before the liver, the kidneys, the stomach are formed, there can be no secretion of bile, of urine, of gastric juice; in like manner, the propensities and talents cannot unfold themselves until the brain is developed.

The divers ganglions, plexuses and nerves of the sympathetic are not developed simultaneously; and for this reason, the functions of the organs of vegetable life do not commence and terminate simultaneously. It is the same with the various ganglions and pairs of nerves of the spinal marrow and of the nerves of the senses. Their successive and independent development and death, explain the successive and independent perfection and failure of the various organs of voluntary motion, and of the senses.

I shall hereafter prove, that the different constituent parts of the brain, each of which is destined to a peculiar function, are equally subjected to successive development and destruction. This explains how instincts, propensities, and talents do not all either appear or fail, at the same periods of life.

As the brain will be the subject of my meditations in all the volumes of this work, I leave it now, to answer a question of high importance, viz. Does the fetus and infant, while inclosed in its mother's womb, enjoy animal life, or, a life purely automatic? How ought its destruction to be judged of before the tribunal of sound physiology? Those who maintain that animal life is nothing but a life of relation, an external life, that all our moral qualities and intellectual faculties are the result of impressions on the senses, must necessarily maintain that the fetus and the newly-born infant are still only automata, whose destruction has no relation to an animated being.

Prochaska says,* "In the fetus and the new-born infant, the muscles have the automatic movement, and not the voluntary, because the brain is not yet in a state to think."

Bichat likewise says, † "We may conclude with confidence, that in the fetus the animal life is nothing; that all the acts attached to this age, are dependent on the organization. The fetus has, so to speak, nothing in its phenomena, of what especially characterizes an animal; its existence is the same as that of vegetables. In the cruel alternative of sacrificing the child, or of exposing the mother to almost certain death, the choice cannot be doubtful. The destruction is that of a living being, not of an animated being."

Yes, doubtless, it is cruel to sacrifice an unfortunate mother to a feeble fetus, still menaced with dangers without number, and on whose life it is still so difficult to calculate. Nothing but certain religious notions, or the reasons of an ambitious policy, could ever recommend the dire counsel of immolating the mother in the most touching moment of her life, to the precarious existence of the infant. Still, as the expressions of Bichat, "the act involves the destruction of a living being, and not of an animate being," might lead to unlawful abuses, I consider it my duty as a physiologist, to rectify the arguments of Bichat and Prochaska.

---

* Opera Minora, L. II. p. 190.
† Sur la vie, et la mort, p. 125.

I have said that neither the organic, nor the animal life, developed itself fully at once, or enjoyed simultaneously all its activity. If the possession of organic life by the fetus, were contested, because several of the functions of the viscera have not yet manifested themselves, the conclusion would doubtless be severely criticised. Is it, then, more reasonable to refuse to the fetus or to the new-born infant, the possession of animal life, because his brain is not yet formed for all its propensities, all its talents, and for the faculty of thinking? If physiologists had sooner known the plurality of the cerebral organs, and of their functions; if they had distinguished the different degrees of consciousness and sensation, the desires and necessities, from thought or reflection, they would have been cautious about affirming, that there exists no animal life in the fetus or new-born child. The brain of these beings is not, indeed, sufficiently developed to possess ideas, to combine and compare them; but, if this degree of perfection were necessary in order to allow them sensation and desires, it would be very difficult to determine at what period animal life does commence, and when the destruction of an infant becomes an act committed on an animate being, and, consequently, criminal. The infant has not yet the faculties of reflection and imagination; he feels as yet no affection for those of a different sex; he is not yet ambitious, &c., but can we refuse to him the faculty of perceiving, that of memory, of inclinations, of aversions, of joy and sorrow? If the noblest functions of the brain require a certain development and a certain consistence, who shall determine the degree of development, and of consistence, necessary for functions of an inferior order? The new-born child manifests by the outline of his figure, by his movements, and his cries, the states of happiness and of suffering; he equally manifests, too, the desire of nursing, and so of other sensations.

At all events, this work will become an incontrovertible proof, that there exists within us a far more fruitful source of sensations than impressions made on the senses; and consequently that it is altogether false, to assert that animal life commences only with the action of the external senses.

These considerations are sufficient to prove, that the laws of animal organization by no means support the dangerous principle, avowed by certain physiologists.

Of the Special Functions of the Brain, or those which belong to Animal Life in Man and Animals.

In the natural order of the gradation of animals, the nervous system, which presides over the voluntary movements, comes after the great sympathetic nerve. It consists of the spinal marrow inclosed in the vertebral column. And from it, to the right and left, before and behind, issue as many pairs of nerves as there are vertebræ of which the column is composed. In caterpillars, &c., the ganglions and the pairs of nerves proceeding from them, correspond in number to the segments of which the animal consists.

All these pairs of nerves go to the muscles, and give them the faculty of exercising motion.

But all these nerves, at least in the more perfect animals, must be considered rather as conductors of the cerebral influence, than as independent agents; their function ceases, as soon as their free communication with the brain is interrupted.

As, in a healthy state, these functions are exercised with consciousness, they are held to make part of animal life.

Of a higher order, but always dependent on the brain, are the functions of the external senses. I shall have occasion, even in this volume, to determine better than has yet been done, the functions proper to each sense.

I come, then, to the noblest nervous system, the brain, and its peculiar functions.

As to the structure of the brain, I refer my readers to the first volume of my large work. Suffice it to say, that the whole cavity of the cranium or head, beginning with the eyes and ending with the neck, is filled with the cerebral mass. Like the rest of the nervous system, it is composed of gelatinous substance, and of an infinity of nervous filaments, which thence derive their origin.

It is this same brain which governs both the voluntary movements and the functions of the senses. It is this same brain, of which, hitherto, neither the structure nor the functions have been understood, and which yet includes all the organs of the forces, moral and intellectual, both in men and in animals.

In order to conduct my readers by a luminous path, I shall first consider these moral and intellectual forces as all philosophers and physiologists consider them. I shall then show, how they are defined and distinguished by the vulgar, and by common sense, which certainly, in this case, is good sense. The great proportion of philosophers agree in recognizing in the soul only two faculties, the understanding and the will; the understanding, or capacity of receiving ideas; the will, or capacity of receiving different inclinations: even when they speak of a greater number of faculties, they always reduce them to these two principal ones.

According to Aristotle, the soul of man has faculties which are common to it with animals; sensibility, appetite, and the power of motion. It has, also, faculties which belong to it exclusively; the intellect passive, the intellect active, the intellect speculative, and the intellect practical.

Bacon distinguishes two souls; the soul rational, and the soul sensitive. The faculties of the rational soul, are the understanding, reason, reasoning, imagination, memory, appetite, and will. The faculties of the sensitive soul, are voluntary motion, and sensibility.

Descartes recognized four principal faculties; will, understanding, imagination, and sensibility.

Hobbes admits only two principal faculties; knowledge and motion.

Locke admits understanding and will.

Bonnet recognizes understanding, will, liberty, and, in his introduction, sentiment, thought, will, action.

Condillac admits six faculties in the understanding, or seven, counting sensation, the common origin, according to him, of the understanding and the will; sensation, attention, comparison, judgment, reflection, imagination, reasoning; and all these faculties are only sensations transferred or modified. He maintains that all the operations of the soul, thought, intelligence, reason, liberty—all the faculties of a spiritual substance, are only sensation transformed; that all the knowledge which the human intellect can attain, all intellectual and moral ideas—all, without an exception, are so many transformations of sensation.

In the system of Kant, the primitive faculties or functions, pure conceptions, and ideas *a priori*, exist to the number of twenty-five, viz. two forms of sensibility, space and time; twelve categories, or pure notions of the understanding, viz. unity, plurality, totality, affirmation, negation, limitation, inherence and subsistence, causality and dependence; society; possibility and impossibility, existence and non-existence, necessity and contingence; eight notions which depend on these, viz. identity, diversity, agreement, contradiction, interior, exterior, matter, and form; in fine, three forms of reason, consciousness and the soul, God, the universe.

According to M. de Tracy, to think is only to feel, and to feel is, for us, the same thing as to exist; for sensations inform us of our existence. The ideas or perceptions, are either sensations, properly so called, or recollections, or relations which we perceive, or, finally, desires which we experience, springing out of these relations; the faculty of thinking, therefore, divides itself into sensibility, properly so called, into memory, judgment, and will. To feel, properly speaking, is to have the consciousness of an impression; to have memory, is to feel the recurrence of an impression formerly felt; to judge, is to perceive the relations among our perceptions; finally, to wish, is to feel desire. By these four elements, sensations, recollections, judgments, desires, are formed all compounded ideas. Attention is only an act of the will; comparison cannot be separated from judgment, since we cannot compare two objects without judging; reasoning is only a repetition of the act of judging; to reflect, to imagine, is to compound ideas decomposable, into sensations, recollections, judgments, desires. That species of imagination, which is only a true and faithful memory, cannot be distinguished from it.

M. Laromiguière forms the system of the faculties of the soul of two systems—the system of the faculties of the understanding, and the system of the faculties of the will. The first comprehends three peculiar faculties—attention, comparison, and reasoning; the second equally comprehends three—desire, preference, and liberty.

"These three faculties are indispensable, and they suffice for all our knowledge, for the most simple of all systems, as well as for the vastest of all sciences. Attention, comparison, reasoning; these are all the faculties which have been assigned to the most intelligent of created beings. By attention, we discover facts; by comparison, we seize their relations; by reasoning, we reduce them to system.

"Sensibility or the capacity of perceiving, and activity or the faculty of acting, are two attributes inseparable from the soul."

M. Laromiguière admits the action of the object on the organ, of the organ on the brain, and of the brain on the soul; the action or reaction of the soul on the brain; the communication of the movement received by the brain, to the organ which forms the object, or which directs itself towards it. He allows, that the difference in minds does not proceed from the greater or less amount of sensations; "but," says he, "it can proceed only from the activity of some causes, and the inactivity of others; for, in the human mind, every thing can be referred to three causes; to sensations, to the labor of the mind on these sensations, and to the ideas, or the knowledge resulting from this labor. In fine, M. Laromiguière proposes this question, viz.: Do the operations of the mind vary with the objects to which they are applied; or, can we circumscribe them within bounds, and even very narrow ones? By attention, comparison, and reasoning, we can raise ourselves to a knowledge of the structure of the universe, and, consequently, to that of its Author; by desire, preference, and free will, we are, in some sort, the arbiters of our destiny."

"Six faculties then suffice," concludes M. Laromiguière, "for all the wants of our nature. Three have been given us to form intelligence; we call them intellectual faculties; three to fulfil the wishes of our hearts, and we call them moral faculties." *

Such is the manner in which all these philosophers and physiologists wander in the clouds of speculation, pointing out to their pupils, plains, mountains, valleys, water, and fields, and pretending that these are the only things which exist on earth, because, from so elevated a point, they are the only ones which their view distinguishes. If they would but descend from their elevation, they would discover an infinite variety of plants and animals, and would soon find themselves forced to reject classifications, which embrace only generalities.

---

* Leçon de Philosophie, T. I., Quatrième leçon, et p. 354.

Whether we admit, one, two, three, four, five, six, or seven faculties of the soul, we shall see, in the sequel, that the error is always essentially the same, since all these faculties are mere abstractions. None of the faculties mentioned, describes either an instinct, a propensity, a talent, nor any other determinate faculty, moral or intellectual. How are we to explain, by sensation in general, by attention, by comparison, by reasoning, by desire, by preference, and by freedom, the origin and exercise of the principle of propagation; that of the love of offspring, of the instinct of attachment? How explain, by all these generalities, the talents for music, for mechanics, for a sense of the relations of space, for painting, poetry, &c.?

Let us now direct our attention to the language of common society, when the question arises respecting the moral and intellectual character of individuals.

I visit a numerous family, limited as much as possible to itself, and all the members of which live under the influence of the same circumstances. I engage the parents in conversation on the qualities of their children. "Our children," they tell me, "are not alike; they seem as if they were not born of the same father and mother. Yet, they eat at the same table, their occupations are the same. Here is our eldest son, who has always the air of being ashamed of his birth. Ever since he happened to see a coxcomb richly dressed, he despises his companions, and is ever wishing to leave us and to go to some large city: he is never content with the dress of his other brothers; he even affects to speak and to walk differently from the rest of us. God knows where he got this ridiculous vanity. Our second son, on the contrary, delights only in his domestic employments; he is our turner, our joiner, our carpenter; no trade is difficult to him; without ever having been taught, he shows in every thing, an address and a spirit of invention, which astonish us. Here again, is one of our daughters, who could never learn the ordinary operations of needlework; but, would you believe it, she sings from morning till night; she forms the delight of every body in the village; at church, it is she who leads the choir; at the sound of music she kindles up at once; she needs but to hear an air once, or at most, twice, when she knows it by heart, and sings it better than any body else; she will never be good for any thing but a musician. And here is another boy, a real little devil, the terror of the village; he quarrels with every body; always beating and always beaten; nothing can break his spirit; he tells with the greatest avidity, all the news of a combat, or a battle, and looks forward with the greatest impatience to the time, when he can be a soldier. The chase is his passion; the more animals he can kill, the happier he is. He never ceases to mock his little sister, who is troubled whenever a chicken or a pig is killed. This little girl is the child that takes charge of the poultry-yard; she bestows the tenderest cares, not only on her brothers and sisters, but on the domestic animals also. If we have to destroy a fowl or a rabbit, she has tears in her eyes. No poor man or sufferer goes from her with empty hands, or without consolation. She is exactly the antipodes of another of her sisters, who, notwithstanding her devotion, is backbiting, avaricious, obstinate, and rarely omits an opportunity of making trouble between us, and her other acquaintances."

This is the faithful picture of a family in the country, where the natural characters have not assumed the mask of a deceitful similarity. All these individuals enjoy equally, the faculty of experiencing sensation, of attention, comparison, judgment, desire, will, liberty; but I have never heard that, in speaking of the character of any one, they made use of either of these expressions, in the abstract or general acceptation, of philosophers.

Let us go into a school or house of education, where all the pupils are under the direction of a uniform system of instruction and conduct. Amidst the great majority of ordinary persons, you will find some wretches, who, though often corrected with rigor, and strictly watched, endanger the morals and the health of others. You will find some who steal books, who are liars, perfidious, cowards, ungrateful, idle, insensible to distinction. In the number of those who carry off the prizes, one excels in the study of history, another in poetry, a third in mathematics, a fourth in geography, a fifth in drawing, &c. Some are eager for political employments, some for military glory, while others devote themselves in preference to literature, philosophy, or the natural sciences. No instructor will point out to you his pupils by any of the abstractions adopted by the metaphysicians.

Thus will it also happen when you take a review of a collection of men of genius. You will find there musicians, painters, sculptors, mechanicians, mathematicians, philologists, travellers, actors, poets, orators, generals, philanthropists, astronomers, etc. etc. Here too there is no question respecting the understanding, will, comparison, desire, liberty, &c.

What are the qualities, which the biographers of remarkable men commonly celebrate? Nero was most cruel, and abandoned himself to the most unbridled voluptuousness: Du Guesclin was a desperate warrior; he would either wound his antagonist, or be wounded himself: Baratier had an astonishing talent for the acquisition of languages; Pascal, from the simple definition of geometry found his way to the thirty-second proposition of Euclid: no science was ever carried by the labors of a single individual to the perfection that geography received from those of captain Cook: Dumenil and Clairon, those celebrated actresses, will long be the models by which our young aspirants will form themselves: Sixtus V. has rendered his name immortal by the firmness of his government and his inflexible justice: before the culture of the sciences, Homer and Dante were the greatest of poets: Catherine de Medicis gave early proofs of her acuteness and her courage: Catherine II. together with the graces of her sex, had a vast and bold mind, a taste for knowledge, and for pleasure, profound ambition, &c.: the graces guided the chisel of Praxitetes, and his genius gave life to matter.

Thus history transmits to us the life of antiquaries, architects, astronomers, dramatists, geographers, historians, mathematicians, musicians, painters, designers, philologists, philosophers, moralists, poets, orators, sculptors, travellers, mechanicians, &c.

But we no where find, that a man or a woman has become celebrated by the understanding and the will, by attention, comparison, desire, liberty, &c.

How, in fine, do we designate the different characters of animals? We say, this dog is cross, gentle, docile, courageous, affectionate, has good local memory, is a coward, has trained himself to the chase, is incapable of being trained; this stallion is excellent for the stud; this horse is skittish; very quiet; docile; very wicked; stupid; this cow is an excellent mother; this sow is a very bad mother, because she devours her young; this ram, this buck, are very ardent; we say that is a carnivorous animal, a graminivorous; the beaver, the greater part of birds, ants, bees, &c., have the instinct of building; several birds have the instinct of migrating, of singing, of living like sheep in flocks or in society; the marten, the fox, are very cunning, and live in couples; the chamois and the diver are very circumspect; the pie is a thief; the weasel and the tiger are sanguinary; the cock is valiant and proud, and so on.

In what species, or in what individual of animals, would philosophers and physiologists class their understanding, their will, their attention, reasoning, desire, preference, liberty?

Is it right, that, in examining the nature and the origin of the moral and intellectual faculties in man, we should take no account of the same faculties in animals? Can man, so long as he is an animal, stand insulated from the rest of living nature? Can he be governed by organic laws, opposed to those which preside over the qualities and faculties of the horse, the dog, the monkey? Do animals see, hear, perceive odors, tastes, sounds objects, otherwise than we do? Do they propagate, do they love their young, are they courageous, mild, vindictive, cunning, otherwise than man.

Is it allowable that philosophers, while boasting to penetrate into the essence of the soul, should treat of man by piecemeal, and confine themselves to making long treatises on the soul, as an insulated being? exercising its functions by itself, making use of the body, at most, as a means of communication between itself and the world; when, from the moment of conception to the last sigh, every thing indicates that in this world, the soul is in dependence on the material organs?

With these pretended general faculties of the soul, would not the moral and intellectual character of men and animals be the ever-varied sport of chance? How, from such indeterminate operations of the soul, could there constantly result in individuals of the same species, the same instincts, the same inclinations, the same total of determinate intellectual faculties and moral qualities?

"But you will not persuade us," say my readers, "that the faculties recognized by philosophers as faculties of the soul, are chimeras. Who can contest the principle that understanding and will, sensation, attention, comparison, judgment, memory, imagination, desire, liberty, are real operations of the soul; or, if you will, of the brain?"

Yes, without doubt, these faculties are real; but they are only abstractions and generalities; they are not applicable to the detailed study of a species, or an individual. Every man, except an idiot, enjoys all these faculties. Yet all men have not the same intellectual or moral character. We need faculties, the different distribution of which shall determine the different species of animals, and their different proportions of which explain the difference in individuals. All bodies have weight, all have extension, all are impenetrable in a philosophical sense; but all bodies are not gold or copper, such a plant, or such an animal. Of what use to a naturalist the abstract and general notions of weight, extent, impenetrability? By confining ourselves to these abstractions, we should always remain in ignorance of all branches of physics, and natural history.

This is precisely what has happened to the philosophers with their generalities. From most ancient to the most modern, they have not made a step farther, one than another, in the exact knowledge of the true nature of man, of his inclinations and talents, of the source and motive of his determinations. Hence, there are as many philosophies as pretended philosophers; hence, that vacillation, that uncertainty in our institutions, especially in education and criminal legislation.

I will not, then, busy myself with the faculties of the soul, as philosophers profess them. We shall see, when the time comes to exhibit my philosophy of man, that these faculties are only attributes common to all propensities, and all talents. The different instincts, mechanical aptitudes, inclinations, sentiments, and talents of man and animals, will form the subject of my researches and meditations. The instinct of propagation, that of the love which both man and animals bear to their young, the instinct of attachment and friendship, of self-defence and courage, the carnivorous instinct, and the propensity to destruction, the sentiment of property, and the inclination to theft, cunning and prudence, pride and boldness, vanity and ambition, circumspection and foresight, educability,* the sense of localities, or relations of space, the memory of words and of persons, the sense of spoken language, or the talent for philology, the sense of the relation of colors, or the talent for painting, the sense of the relation for sounds or the talent for music, the sense of the relations of numbers, or the talent for arithmetic and mathematics, the sense of mechanics, of drawing, of sculpture, of architecture, comparative sagacity, the metaphysical spirit or tendency, the caustic spirit or that of repartee, the talent of induction, the poetic talent, the moral sense and benevolence, or mildness, the talent of imitation, of mimicry or acting; the sentiment of religion and of God, firmness of character; these are the qualities and the faculties which I call moral and intellectual dispositions. It is these dispositions, these qualities, and these faculties, which form the total of the fundamental forces of the soul, the special functions of the brain; it is these forces which I hold to be innate in man, and, in part, in animals, and the manifestation of which is subordinate to organization; it is these qualities, and these faculties, the history of whose discovery I shall exhibit, together with their natural history, their modifications in a sound state, and in the state of alienation, the seat of their organ in the brain, and its external appearance on the head or skull, &c.

---

* According to Spurzheim, this is EVENTUALITY, a much more proper name.

"In comparing animals with men," says Spurzheim, "and one kind of animal with another, Gall found that tame animals have fuller foreheads than wild ones, and that animals are generally tameable, as the forehead is more largely developed; he therefore called it the organ of educability. But I conceive that Gall here attributes to a single faculty, manifestations which depend on intellect generally. The title educability, is evidently bad, seeing that every faculty is susceptible of cultivation; in other words, capable of exercise and direction.

All these treatises will be accompanied with an application to human institutions, to education, morals, legislation, medicine, &c.

The work will be terminated by considerations on the characteristic forms of the head in each nation, on physiognomy, pathognomony, and pantomime, on the internal sources of imitation in general, and of the imitation of each affection, each sentiment, each passion, in particular; on universal language, the philosophy of man, the motives of our actions, the origin of arts, sciences, and of the different states; on the perfectibility of the human race, the extent of the sphere of each species, and of each individual, according as they are endowed with organs, more or less numerous, and more or less active.

As this first volume will be particularly devoted to the moral part of the physiology of the brain, and as the ignorant and malicious reproach the doctrine with immoral and irreligious tendency, I have thought it my duty to refute these objections, and to give assurance to those of timid minds.

Before entering directly into the discussion of my principles, it will be useful to remove an unfavorable impression, which my manner of proceeding in the exposition of my proofs, might produce on a certain class of readers, little accustomed to the study of natural history.

I often institute comparisons between men and animals: Is this comparison appropriate; is it even necessary? I am going to answer these two questions.

Is it permitted, is it even necessary, to compare man with animals, in order to acquire a complete knowledge of his nature, moral and intellectual?

Those who make the moral and intellectual acts of men to flow from the understanding and will, independent of the body, and those who, being wholly strangers to natural science, still believe in the mechanical action, in the *automatism* of brutes, may esteem the comparison of man with animals, revolting, and absolutely futile. But this comparison will be judged indispensable by those, who are familiarized with the works of Bonnet, Condillac, Reimarus, Georges Leroy, Dupont de Nemours, Herder, Cadet Devau, Huber, Virey, and especially by those who are ever so little initiated in the progress of comparative anatomy and physiology. Man is subject, as we have seen, to the same laws which govern plants and animals.

The knowledge of man, supposes the knowledge of the elements of which he is composed, as the knowledge of the mechanism of a clock supposes that of the wheels, levers, spring, weights, balance, movement, &c.

The organ of animal life, the brain of man, is an assemblage of particular organs, many of which are found in animals. The animals of inferior classes have, by the fact of their inferiority to others on the score of intelligence, fewer cerebral organs; they have only the first rudiments of the human brain, and they are, consequently, easier to decipher than those animals which are provided with a more complex brain, and a more complicate animal life, or with more numerous instincts and talents. It naturally follows, that in order to attain the knowledge of man in all the parts which constitute his brain, all his propensities and talents, it is necessary to study the animals one after another, following the gradual march which nature has observed, in the succession of their cerebral organs, and faculties.

This study opens to the philosophical observer, a field infinitely more vast than is supposed. The brutes, the objects of all the contempt resulting from the ignorance and pride of man, share so many things with him, that the naturalist finds himself sometimes embarrassed to determine where animal life terminates, and humanity commences. Animals are produced, born, and nourished, according to the same laws as man; their muscles, vessels, viscera, and nerves, are almost the same, and exercise the same functions; they are endowed with the same senses, of which they make use in the same manner; they are subject to similar affections, to joy, sadness, fear, alarm, hope, envy, jealousy, anger; they have the most part of our propensities; they are naturally inclined, as we are, to propagation; they love and foster their young; they have attachment for each other and for man; they are courageous, and fearlessly defend themselves and theirs against their enemies; like us they feed on vegetables and on other animals; they have the sense of *property*, and while some are cruel and sanguinary, others take delight in theft; they are sensible to blame and to approbation; they are mild, docile, compassionate, and mutually assist each other; others are wicked, indocile, wayward, obstinate; they retain the recollection of benefits and injuries, are grateful or vindictive; they are cunning and circumspect; they foresee the future by the past, and take the necessary precaution against the dangers which menace them; they correct their false judgments and their unsuccessful enterprises by experience; they have the idea of time, and foresee its periodical return; they have memory; they reflect and compare; they hesitate and are decided by the most urgent motives; they are susceptible of a certain degree of individual perfectibility; they even form abstractions; by means of articulate language, or by gestures, they communicate their ideas, their wants, their projects; they acquire more sagacity and knowledge, by virtue of the circumstances which force them to be more clear-sighted and more cautious; they balance the evil consequences of certain actions which their memory recals to them, with actually stimulating desires; they are seen to follow a deliberate plan of conduct agreed upon between several individuals; they know each other; they sing, or are sensible to the harmony of music; they have an astonishing local memory, and perform long journeys; a great number among them build; some even count; very often their actions denote a sentiment of morality, of justice, and injustice, &c.

One might almost be tempted to say, with Lactantius, that except the religious sentiment, and the knowledge of God, there is no moral quality, and no intellectual faculty of which the animal kingdom, as a whole, does not share at least the first germs. Should it be thought that this comparison degrades man, I should answer with Pascal,* that if it be dangerous to show man too much, in how many respects he resembles the brutes, without pointing out his greatness, or, to let him see his greatness too much without his baseness, it is still more dangerous to leave him in ignorance of both. We shall not recognize the less, in this work, the distinguished place which the Author of nature has assigned to man; his real advantages are sufficiently conspicuous to establish, of themselves, his superiority, without having recourse to distinctions which experience and natural history disavow. The real detractors of the human species are those, who think they must deny the intelligence of animals, to maintain the dignity of man. St. Gregory of Nyssus,[*] and St. Augustine[†] long since remarked the necessity of comparing men with animals.

---

* Pensées sur la religion.

I come, then, at length upon the question, What is the origin of the instincts, mechanical aptitudes, propensities, talents; in a word, the moral qualities and intellectual faculties of man?

---

[*] De hominis opificio. Baziliæ, 1567—ch. 18.
[†] Lib. de vera religione.

SECTION II.

ON THE ORIGIN OF THE MECHANICAL APTITUDES, INSTINCTS, PROPENSITIES, TALENTS; OF THE MORAL AND INTELLECTUAL FACULTIES OF MAN AND ANIMALS, IN GENERAL.

It is impossible to treat with propriety of the moral and intellectual faculties of man, without having a just idea of their origin. Philosophers have always regarded the following questions as the most important to be treated of in the philosophy of man.

Is man born without determinate faculties, a *tabula rasa*, a blank leaf, entirely indifferent? Does he bring into the world with him, the dispositions, which he manifests at a later period, or, does he acquire his faculties only by his relations with the external world? To what extent are the impressions, made on the senses, the source of his sensations and ideas? What is the origin of moral good and evil? Is man born entirely good, or entirely wicked, or, with a mixture of contrary dispositions? Are all men endowed, to the same degree, with the qualities essential to their nature, or, are the differences observed in this respect, due to the influence of accidental causes posterior to birth? Are these differences, on the contrary, determined in the womb of the mother? And if they are innate, how are we to cultivate, to perfect them, to repress or to direct them, according to the demand of individual or general good?

These questions, when they are resolved, will infallibly lead to the knowledge of the true sources of our propensities and our faculties, and, consequently, the prime motives of our actions. They therefore merit the most serious attention on the part of religious and moral instructors, judges, legislators, philosophers, and physicians.

The importance of these questions having been generally recognized, it will be impossible to avoid, in this work, the recurrence of some ideas which are found insulated in other authors, such as Bonnet, Georges Leroy, Reimarus, Herder, Cabanis, &c. But, on this subject, so vast and so worthy of our meditations, we have, as yet, had only scanty materials; we have wanted sufficient data; those, which we seemed to have, were too contradictory, to deduce from them the sure principles, which should serve as the basis for a complete and consistent doctrine. I shall support each of my propositions with such a number of positive facts, that they will not at all present simple opinions, but will have the character of remarkable truths, which, at all times, will be able to stand the test of experience, and, consequently, will be of permanent utility.

The mechanical aptitudes, instincts, propensities, talents in general, the moral qualities and intellectual faculties of men and animals, are innate.

After having clearly indicated, in the preceding pages, the faculties which form the object of my researches, the reader cannot any longer confound what I understand by dispositions, and by innate faculties, with the expressions, *ideas, innate notions, and innate principles.* Thus it will be superfluous to fatigue him with metaphysical discussions of the hypotheses of Plato, Aristotle, Pyrrho, Zeno, Descartes, Leibnitz, Malebranche, Bacon, Locke, Condillac, Buffon, Helvetius, &c., on the origin of the faculties of the soul and mind, and on the origin of ideas.

It will be seen, also, that I am far from understanding with M. Laromiguière, by dispositions and innate faculties, a simple passive capacity, such as that of a block of marble, which submits itself to the caprice of the sculptor, according as he wishes to make of it a Satyr or an Apollo. I understand by innate dispositions, mechanical aptitudes, determinate instincts and propensities, determinate faculties and talents. I understand, what I shall prove in the following volumes, that each cerebral organ is impressed with a determinate tendency; that each organ enjoys an internal perception, a force, a faculty, an impulse, a propensity, a feeling, peculiar to itself. Here, there is no vague and uncertain result either of an exterior influence, or of an interior abstraction. As soon as the relative organs have acquired their perfect development and entire activity, the functions which result, are as determinate as the dispositions themselves, of which these organs are the depositaries.

"Do not believe," says M. Laromiguiére, "that it is necessary to recognize and register as many faculties or capacities, as we remark acts or modifications of the human mind. In place of enriching the science, this would be to annihilate it. What would be thought of an anatomist, who, having observed that the fibre of the eyes which produces red, is not the fibre which causes blue; or, that the fibre of the ear which gives one tone, is not that which gives a different one, should see in this observation the greatest of discoveries? You have believed, till now, he would tell us, that you are reduced to the small number of five senses. I am going to teach you that nature has been more liberal to you. How many organs of sight has she given you? I see in the first place, seven principal ones, destined for the seven primitive colors."

As M. Laromiguiére admits only three intellectual, and three moral faculties, he alludes in this place to the fundamental faculties, of which I already recognize from twenty-seven to thirty, and which he would qualify as simple modifications of his six faculties.

It is certainly not necessary, nor allowable, to admit as many particular fundamental dispositions, as we can remark acts or modifications in the human mind. Yet, it may be maintained, that the example taken from the eyes and ears, is singularly inconclusive. Bonnet believes, and it seems very probable, that each nervous fibre has its proper function; that is, that each fibre of a nervous organ modifies the action of this organ. Why, otherwise, should nature have created it? The modifications of the functions of the senses explain themselves, in this view, in a sufficient manner; and we can conceive, why certain persons are incapable of perceiving certain colors, or certain sounds, while they perceive others very distinctly; why such a man finds very agreeable, what shocks the taste of another; why the same senses in different species of animals, and even in different individuals, are susceptible of flavors, odors, &c., of a nature altogether different, and so on. A more extended development of the same conjecture, might dispose the reader to consider each nervous fibril, whether in the nerves, or in the brain, as a little peculiar organ, destined to a small part of the total function.

But the question is not respecting the modifications of the functions; it relates to functions and dispositions essentially different. All the modifications of vision are owing to the general organ of sight; in the same manner as all the modifications of digestion, and of the seminal secretion belong to their organs: but who will dare to say that sight, hearing, taste, smell, touch, the seminal secretion, and digestion, are simple modifications of the same function? Who will venture to make them depend on one single source, one single organ? In the same manner the mechanical aptitudes, instincts, propensities and talents, which I recognize as fundamental or primitive forces, manifest themselves under thousands of modifications; but every thing is opposed to our regarding the instinct of propagation, that of the love of progeny, the carnivorous instinct, the talent for music, poetry, calculation, the feeling of justice and injustice, &c., as simple modifications of a single faculty.

Thus, as it is necessary to admit five different external senses, since their functions are not simply modified or transformed sensations, but functions essentially different and belonging to distinct organic apparatuses, so is it finally necessary to recognize the various industrial aptitudes, instincts, propensities, talents, not as modifications of desire, preference, liberty, attention, comparison, and reasoning, but as forces essentially different, belonging, as well as the five senses, to organic apparatuses, peculiar and independent of each other.

The innateness of the fundamental forces, moral and intellectual, is the basis of the physiology of the brain; for, if in place of being able to demonstrate that they are innate, we could prove that they are only the accidental product of external things, and external senses, it would be useless to seek their origin and seat in the brain.

To give an extended demonstration of this first principle, I shall first throw a rapid glance upon inanimate nature. I shall then continue to compare man with animals, when any points of analogy appear between them.

It is to Philo Iudæus that we owe the doctrine, that nothing can subsist without certain properties. It is only the metaphysical theologians, that have embraced the error, that all activity and all action is owing to a spiritual being, and that inertia is the essence of matter. The weight of earths and metals, their attractive and repulsive forces, the laws of their forms, their affinities, their antipathies for other substances, &c., are properties which result from the mixture, form, and proportion of the integrant particles of these bodies, and which are so intimately identified with them, that the extinction of these properties necessarily involves the dissolution of the bodies: take away the properties of any substance whatever, and the idea of its existence disappears.

It is the same with the nidus formativus, or the plastic soul, which the ancients admitted in the vegetable kingdom. The laws, by which the fructification of plants is produced, according to which their germ is formed, developed, and finally acquires its whole increase, their specific irritability, peculiar relations to each other, and to other beings, are properties essentially inherent in their nature.

If we thence pass to animals, and reflect on the instincts, on the mechanical aptitudes, which they manifest, from the moment they see the light, it is evident that these instincts, these mechanical aptitudes, are innate. The spider, when hardly hatched, weaves his web; the youngest ant-lion digs his conical hole in the sand; the bee, before going for the first time into the fields, raises himself into the air, and turns to reconnoitre the position of his abode; the young quail and the young partridge, from the moment they quit the egg, run with admirable address in pursuit of insects and seeds; the duckling, and the tortoise, still dragging the remains of the egg from which they have just emerged, make their way to the nearest water; the new-born infant seeks its mother's breast, and presses it with its hand to force from it the nutritious fluid; it seizes and sucks the nipple, as the young dog and the calf do the udder; the calf alternately draws and repulses the teat; the puppy presses by springing the udder of its dam, &c. All these beings act thus, not because they have calculated that these processes are necessary to their preservation, but because nature meets their wants, and has united the knowledge of them intimately with their organization. In all these cases, there are no previous habits, no instruction, no experience.

When, still later we see the insects in their metamorphoses, weave themselves an envelope; when we see the bee, at his first coming out, seek the willow and the strawberry, construct hexagonal cells, as the bird builds his nest, and the beaver, his hut; when we see the bird bruise the worm with his beak; and the monkey cut with his teeth, the head of the coleoptera, (the beetle,) before devouring him; the hamster lay up provisions; the dog conceal his superfluous food; the squirrel open the nut at the pointed extremity, and detach the scales of the cone of the savin at the base; the hog devour, with avidity, the first acorn he finds; the goat throw himself on the cytisus which he meets for the first time; the hound, without any previous instruction, pursue and seize the boar; the ferret, though brought up on milk and in a cask, becomes furious at the first sight of a rabbit; and the rabbit, who likewise at the first glance recognizes in this animal his natural enemy;—we must allow that all these actions show us the result of instincts given to these individuals, and without which, they would ere long disappear from the face of the earth. The conduct of animals in these circumstances, requires neither a previous examination by the senses, nor an innate idea of the object of their appetites, nor a comparison and choice among several objects. How should they have an idea of that, which they have never in any manner experienced? In the same way as a dish at the first impression, pleases or disgusts us; so animals and children choose or reject the objects of the external world, according to the laws of sympathy and antipathy which exist between these same objects, their nutritive organs, and their senses.

To the same cause are owing the sensations and emotions, which men term affections. Satisfaction and discontent, pleasure and pain, joy and sorrow, desire, chagrin, fear, shame, jealousy, anger, etc., are so many states of our internal organization, which the animal and the man do not determine, but which both feel before having thought of them. These sentiments spring from the natural disposition of the animal and the man, without any concurrence of their will; and they are as decided, as strong, as vivid, the first time, as after having been often repeated. All which passes on this occasion, is an arrangement produced by nature, and calculated with reference to the external world, for the preservation of the animal and the man, without any consciousness, reflection, or active participation, on the part of the individual. The animal and the man are organized for anger, hatred, grief, fear, jealousy, etc.; because there are objects and events, which, from their nature, must be detested or loved, desired or feared.

It is for this reason, that the different states of the soul and its various affections, when they have a certain degree of intensity, are accompanied with peculiar external acts, such as gestures, movements, attitudes, which, likewise, take place involuntarily and without consciousness, but which always correspond, agreeably to the design of nature, to the preservation and the wants of the individual. The limbs are drawn backwards, when one is threatened by a dangerous object, though there has been no time to think of the danger, and of the means of escaping it. Do we see an object on the point of crushing us, and which we cannot avoid, we bend the back before thinking of the resistance we offer in taking this position. The infant who is still ignorant of the existence of its mother, and of the cares which she takes of it, cries when it is hungry, or when it experiences any necessity. Puppies, though destitute of hearing for the first fourteen days of their life, and though not knowing that their cries are heard, still cry, and thus succeed in bringing their dam to their assistance. It is the same with the affections of the adult being. The expression and the gestures which accompany these affections, have been calculated to refer themselves, either solely to external objects, or to analogous beings, which surround the animal or the man, and to produce a reaction which tends to preserve them. Neither man nor the animal takes any other part in this, than to obey the natural impulse which results from their organization.

When man begins to exercise his faculties with a distinct feeling of consciousness, of personal co-operation and will, each one is inclined to imagine that he produces these faculties himself. Yet, if we first confine ourselves to considering the qualities common to the animal and to man, the comparison established between them does not permit us to doubt, that these faculties are innate. Now we find in animals a number of propensities common to them with man; that of the mutual loves of the sexes, of the care of parents for their offspring, of attachment, of mutual assistance, of sociability and the conjugal union; the propensity to peace and war, that to mildness and cruelty; of the pleasure found in being flattered; of the forgetfulness and the recollection of ill treatment; we cannot therefore imagine, that in man and in animals, these qualities, wholly similar, should have a different origin.

Let us admit, that these qualities are ennobled in man; that the animal desire of propagating the species, is transformed in man to moral love; that the love of the females of animals, for their offspring becomes, in women, the amiable virtue which inspires their tenderness for their children; that the attachment of animals changes in man to friendship; their sensibility to caresses, into ambition and a sentiment of honor; that, from the song of the nightingale, there results in man the art of music; from the nest of the bird and the hut of the beaver, man's temples and palaces; we shall still see, that the gradual improvement of the organization affords a measure to the elevation of these faculties, and that the employment and direction of these, acquire more dignity in proportion as more elevated faculties join themselves to the first. Man consequently presents in all this only modified phenomena, and it is doing violence to reason, to place him out of the domain of nature, and to subject him to laws essentially different from those, to which the primitive faculties, common to man and animals, are subjected.

If, in fine, man has faculties which essentially distinguish him from the animal, and which give to him the peculiar character of humanity, he also offers in his brain, especially the superior and anterior portions, parts which animals have not; and the difference of effects is thus found to be explained by the difference of causes. All anatomists and physiologists agree, that the faculties augment in animals, in proportion as their brain becomes more compounded and more perfect. Why should man alone form an exception to this general rule? If we see in man a being, who compares different ideas and notions, who searches into the causes of phenomena, who deduces consequences; who establishes general laws and rules; if we see him measure the revolutions of worlds, their duration and their intervals, traverse the whole surface of the ocean, estimate the merit and demerit of actions, bear within him a judge to which he is subjected, dictate laws for himself and for his fellow-men, in fine, exalt himself to the knowledge and adoration of a God, let us beware of thinking that these faculties are the work of his invention, or that of the accidental action of the external world. This would be to suppose that the Creator has abandoned man to himself, in matters the most important, or, that he has made his perfectibility depend on simple accident. No; in this as in other respects, God has traced for him the circle in which he must act, and has directed his steps. It is for this reason that at all times, and among all nations, man presents the same essential qualities of which he could not have conceived the idea, without the predetermination of the Creator.

Every where this plan of nature makes itself known by signs so evident, that it is impossible to call it in question. "We see," says Herder,* "that from the stone to the crystal, from the crystal to the metal, from this to the plant, from the plant to animals, and from them to man, the forms of the organization still go on improving; that the faculties and inclinations of beings augment in number in the same proportion, and end by finding themselves united in the organization of man so far as this can include them. This analogy, however, is not sufficient; it is easy to recognize in man organs of more elevated faculties; we may indeed demonstrate their existence. Thus it is impossible not to admit, that the fundamental dispositions of the properties of animals and of man, are innate, and that the activity and the manifestation of these faculties, are predetermined by the organization.

---

* L. c. Th. i. s. 265.

Exposition and refutation of the different opinions on the origin of instinctive forces, moral and intellectual, in man and animals.

The anatomical and physiological knowledge of the brain, even to our times has been so defective, that no relation could be developed between it and the ingenious aptitudes, the instincts, propensities, sentiments, talents, or, in general, the moral and intellectual faculties of man and animals. Hence it has happened, that the anatomists and physiologists, themselves have presented to the metaphysical philosophers, as so many positive facts, fictitious phenomena, which these last have employed in order to give weight to their false doctrines. Buffon advanced that the brain of the orang-outang does not differ from that of man; Bichat and Sprengel doubt whether the superior parts of the brain or the circumvolutions of the hemispheres, contribute in any respect to the moral and intellectual functions: these two authors and their followers, go so far as to maintain that we might remove large portions of these parts without the faculties being impaired. We still hear of brains ossified, and even petrified; of brains, the half of which was reduced to pus; of skulls, the whole cavity of which contained only water,—and it is added, with full confidence, that the will and intellect did not suffer. Willis having found in an idiot a brain five times smaller than that of a man of sound mind, pretended to say, and Sprengel has repeated it after him, that this brain had the same parts as a complete human brain. Even authors who pretend to have made a particular study of comparative anatomy, have yet recently advanced that the brain of mammiferous animals is composed of the same parts as that of man.

The specious hypotheses, originated and diffused by philosophers of the first order, on the influence which the senses and education exercise on the source of ideas and faculties, must, necessarily, have contributed to facilitate the adoption of these errors, and to turn away the minds of men from the true origin of our moral and intellectual forces.

Let us first examine what the influence of the senses can be on our moral and intellectual powers, whether Aristotle was correct in saying, 'Nihil est in mente quod non olim fuerit in sensu.'

The senses and the sensations, received by external impressions, cannot give truth to any ingenious aptitude, any instinct, propensity, sentiment, or talent, any moral or intellectual faculty.

In the first volume of my large work I have considered, not only the anatomy, but also the functions of the five senses. I have assigned to each sense the sphere of activity, which nature has allotted to it. I have rectified the numerous errors which naturalists and physiologists still commit in their works, and in their lectures. I have proved, in opposition to those who make the perfection of the intellectual faculties to flow from the delicacy and the greater perfection of the senses, that these five senses are almost all more delicate, more perfect in the different species of animals, than in the human species. I have there entered into the details of each sense.

As respects taste, for example, I have proved that birds and fishes possess it, as well as the mammifera.

As to smell, I have shown that it is the first sense which gives to man and to animals the idea of distance; that it is not by the sense of smell, that animals find from a distance and after a great lapse of time the place of their abode; and that the carnivorous animals have not this sense more acute than the graminivorous.

As for hearing, I have demonstrated, that we have hitherto been mistaken in attributing to this the talent for music, and to the glottis the talent for singing; that it is not the hearing, which gives the capacity for language; that the languages, however imperfect or perfect they may be, are not the creation of the hearing, but of the cerebral organization; that the irresistible and lawless acts of certain deaf and dumb persons should not be attributed to their want of hearing, but to the imbecility of their minds, &c.

I have rendered to the sight its just rights, of which the philosophers had deprived it. I have proved that the eye, without the aid of any other sense, and without previous exercise or instruction, can perceive, not only the impressions of light and colors, but likewise those of forms, size, direction, number, and distance of objects. I have established, that the eye is not the organ of the talent of painting, and I have seized the occasion to show the great difference, which exists between the *passive* functions of our organs and their *active* functions. I have also demonstrated that man and animals fix objects, see, and look actively, with one eye only.

What I have rendered to sight I have taken from touch. This sense is not, as most authors regard it, the only mediator, the director, the reformer, or rectifier of the other senses; and its degrees of perfection have no influence on the intelligence and perfectibility of man and animals.

Thus I may refer my readers for all these objects to my large work. Here I shall confine myself to extracting what concerns the five senses, under their physiological and philosophical relation.

We call *external senses* the nervous systems, which, besides their internal action, receive, by means of external apparatuses, the impressions of the exterior world, and produce in the brain the sensations and ideas of these impressions.

Consequently, these systems reveal to the living being the objects, which exist out of himself; with each sense the animal discovers a new world; thus the creation grows larger or smaller for him, according as he is endowed with senses, more or less numerous or perfect. Without the senses, animals and man would remain shut up in themselves, and all their consciousness would be limited to their internal life. But, provided with senses, they enter into communication with the immensity of nature; associate with all the beings which surround them, and a continual action and reaction are established between animate and inanimate beings.

What can interest man more than his senses, to which he owes so many sensations, so many enjoyments? Thus have they always been the object of his most assiduous researches. Yet, who would believe it? Not only has he remained behind in the knowledge of their interior organic functure, as I have proved in my anatomical description, but farther, he has not been able to agree with himself in their peculiar functions, and the influence which they exercise in the development of our minds. On this point, the most extravagant, the most vague, and the most irreconcileable opinions, exist. It is true some errors have been corrected, from time to time, but no author has yet established principles, which, in a physical and physiological view, have offered a system carried out and complete.

Sometimes it is said, that we cannot, without the aid of the senses, receive any idea; all our knowledge, all the faculties of our minds and our souls are the work of the external world; and sometimes, again, we are allowed sensations and ideas, but such as cannot be excited without the mediation of the senses. In both cases, the perfection of the intellectual faculties of man, of the different species of animals, and of the individuals, is regarded as a result of the perfection and harmony of their senses. Sometimes, again, the senses are only instruments, and the mind, freely and independently of all organization, modifies the impressions which are transmitted to it; sometimes there is admitted an external and internal source of our sensations and ideas, and they are both more or less subjected to the laws of organization. We continually hear complaints repeated against the illusion of the senses. Finally, some reject absolutely, the evidence of the senses and all judgment which is based upon it; the external world then becomes the deceitful image of our internal; the sensible world is rejected, as the least worthy object of the research of man, and it is only, when the philosopher has learned to construct from himself the external world, that he can elevate himself to general, necessary, and eternal truths.

If this last proposition be true, there is no need of our collecting such numerous facts, in order, by degrees, to deduce from them laws and principles. In a short time the spring of our own imagination will raise us to a rank higher than that, to which the longest and most active life would enable us to attain, by the path of meditation and of experience. But, if we receive our ideas and all our knowledge solely from the senses, then man and animals are the perpetual sport of external fortuitous and versatile objects; the measure of the faculties has no other basis than the perfection of the senses; and education, the end of which ought to be to render individuals and nations what it is desirable they should be, has no other secret than that of duly calculating the action of the external world on the senses.

If the material conditions of the faculties of the soul and mind are bounded to the mere organs of the senses, it is an idle project to seek in the brain and its parts, the organs of the highest faculties. If we must seek, without any reserve, the principle of all the actions of men and animals, in their internal and innate nature, and if, in consequence, we have not sufficient regard to the influence of surrounding objects and social institutions, we are in manifest contradiction with the history of all ages and all individuals. If, in fine, we admit that the senses procure numerous materials, that the mind works by means of the most noble implements, and if we can establish that the internal man himself is endowed with a number of dispositions, we must seek for our ideas and our knowledge, partly in the phenomena of the external world, and their judicious employment, and partly in the innate laws of the moral and intellectual faculties: by pursuing these two rules we shall arrive at practical and general truths. We cannot, then, under any point of view, regard, as an idle enterprise the efforts of the physiologist, who seeks to determine with precision, how far the senses extend their influence, mediate and immediate, on the functions of a superior order. In order to be able to deduce surer principles and more general consequences, I have laid down in my treatise on the functions of the senses, (vol. i. 4to ed. p. 149, etc.) what belongs, and what does not belong, to each sense in particular. In treating of the organs of the relations of space, colors, and sounds, I shall again prove, that those have been wrong, who have attributed the faculty of finding one's way home from a distance to the sense of smell; that of the talent for painting to the eyes; that of music and language, to the hearing. Accordingly I shall say no more on this subject in this place.

But almost all philosophers and naturalists have so very greatly exaggerated the merit of the sense of touch, that I deem it necessary to repeat here, what I have said on this point in my treatise on the senses.

Of Sensation and Touch.

In treating this subject, I regret to have more to refute and correct, than to establish; but the surest means of approaching the truth, is to remove errors and prejudices.

Before speaking of the touch, properly so called, I must say something of sensation in general. It is certain that a great number of erroneous opinions on the touch have arisen and are maintained, solely because the difference has never been accurately established between the idea of perception, sensation, and that of touch, tact.

The faculty of awakening perceptions or sensation is common to the whole nervous system. To perceive and to feel are phenomena which we observe first and most generally in all beings endowed with the faculty of consciousness. Whatever alteration may have taken place in their interior or exterior, becomes necessarily a sensation, as soon as the animal has any consciousness of it. To taste, feel, see, hear, and touch, are sensations; but we likewise feel pain and pleasure, itching, tickling, weariness, &c., produced by internal causes; we feel hunger, thirst, the calls of nature; we feel joy and sadness, hatred and love, humility and pride, hope and despair, desire, anguish, fear, terror, &c.: the acts of our intellectual faculties, thinking, desiring, and wishing, are likewise sensations.

It follows, that to feel or perceive, is a function common to all the particular functions of the nervous system; it is properly and solely the general sense, without which no being can be conscious of his own existence, or the existence of external objects. It is only in this acceptation that it is said, with truth, that the origin of all our knowledge is in sensation. But when, by sensation, we understand only the impression of the external world on the senses, as most authors do, we neglect wholly the interior man and animals, and forget that the exterior world is known only so far as our interior has the faculty of perceiving it: and that, furthermore, this faculty is an abundant source of numerous sensations and ideas, by which each being preserves his individuality, consciousness and peculiar nature, though all are equally surrounded by the same objects. Prochaska had already called the attention of modern physiologists to the interior sensations. Tracy more recently has done the same. Cabanis has made one step farther, by adopting *instinctive tendencies*. Still, most of these authors have remained behind, on these subjects, as the following remarks on the sense of touch will prove.

I have shown, in my treatise on the functions of the senses, (large work, vol. i.) to what extent the senses must produce the ideas of external things: I have shown to what extent the ear and the eye give an exact idea of space, form, number, figure, and the position of a body: I have demonstrated that the education or cultivation of the touch answers no purpose; that the eye sees according to its proper laws, the relations of objects which have just been enunciated, and that it would be ridiculous to accuse nature of having created senses, the functions of which would be possible, only by the aid of another sense entirely different. In this manner, I have already greatly diminished the prerogatives, which were formerly attributed to the sense of touch.

But I have not yet spoken of the opinions which particularly concern this sense. Most authors regard it as the sole mediator, director, and reformer of the other senses. Without it, say they, there would be no external world; for, "as our perceptions," says Condillac,* "are not the qualities of objects themselves, but, on the contrary, are only modifications of our soul; it is consequently easy to conclude, that a man limited to the sense of smell would have had nothing but odor; to that of taste, flavor; to that of hearing, only noise or sound; to sight, only light and color. Then the greatest difficulty would be, to imagine how we contract the habit of referring to external nature, the sensations which exist only in ourselves. In fact, it seems very astonishing that with senses, which experience nothing except in themselves, and which have no means of realizing external space, men can refer their sensations to the objects which occasion them. How can sensations be extended beyond the organ, which experiences and limits it?

"But, in considering the properties of touch, it might have been perceived, that it is capable of discovering this space, and of teaching the other senses to refer their sensations to the bodies which occupy it."

"The sensation of touch," says Degerando,† "merit, from the philosopher, peculiar attention. They are the first which affect the individual; and if, before having received the instruction of touch, the individual should hear a sound, or find himself affected by an odor, he would perceive nothing but the impression resulting from it; he would neither think of referring it to a foreign cause, nor regarding it as a modification of one, whatever philosophers may say. For, in the first place, there is nothing in these sensations fitted to inform him of an object foreign to himself; and so long as a man knows nothing foreign to himself, how should he be led to notice self?" (son moi.) *

---

* Traitè des som sensation. Lond. 1754. Vol. I. p. 119.

† Degerando des signes ou de l' art de penser, Vol. I. p. 12.

"A man deprived of touch," says Dumas, with Lecat, "would have no sensation, but what he would consider as confined to his own person, and would be absolutely incapable of distinguishing whatever was concerned in producing it. But, with the faculty of touch, he can put objects in their places, determine the extent of space which he occupies, and ascertain the distance which separates him from each."

If touch makes us know the external world better than the other senses, for the sole reason that it finds bounds and resistance to its action, I will inquire whether the eye does not also meet with limits and resistance. If we must deal with metaphysical subtilties on the existence and non-existence of external things, then touch, resistance, repulsion, will not instruct us better than any other sensation; for, just as all other sensations have their seat solely in the brain, so the sense of touch, resistance, repulsion, has its seat only in the brain. No one has yet placed these sensations in external objects; and, consequently, the pretended illusion may as well take place in the touch as in any other sense. We must, then, admit with Locke,† that the ideas "which enter the mind by more than one sense, are those of extent or space, figure, motion, and rest;" and I conclude with Tracy,‡ that "the sensations pertaining to touch,

---

* Principe de physiologie, vol. iii. p. 434.
† Hum. Under. vol. i. p. 194.
‡ Idéologie, Partie I. p. 114.

have not, in themselves, any essential prerogative by nature which distinguishes them from all others. Whether a body affects the nerves concealed under the skin of my hand, or, whether it produces certain agitations of those spread over the membranes of my palate, nose, eye or ear, it is a pure impression which I receive, a simple affection which I experience; and there seems no reason to believe, that one is more instinctive than the other; that one is more fitted than the other to lead me to the conclusion, that it comes from a being foreign to myself. Why should the simple sensation of a puncture, of a burn, of tickling, of pressure, give me more knowledge of the cause which produces it, than that of a color, of a sound, or of internal pain? There is no reason for thinking so."

If philosophers, who, with Condillac, have reduced man to the state of a statue, had had the prudence to form this statue after the model of man, and to make it out like him, they would have presented principles wholly different with regard to the functions and the influence of the senses. I might, for example, remind them, that man and animals are accustomed to transfer to the external world, every thing extraordinary which passes within them, and to regard it as an accident of the world without them. A blur on the eye produces the impression of surrounding flames; the flow of blood to the ear, make us imagine that we hear the sound of bells; the sick man wishes removed from him the imaginary fly which he has before his eyes, the odor which offends his nose, and the ice-cold corpse, which lies at his side; in our dreams, we eat the most delicious viands; we walk in delicious gardens, bathe in tepid waters, fly in the air; the coward is in the hands of robbers; the gamester draws his prize from the wheel of fortune; the tender mother throws herself into the flames to save her child. Has not the illusion of the senses invented apparitions, visions, spirits, and wizards? The madman hears the celestial choirs; he fears the devil who follows him with eager step; he attacks whole legions;

dies an hundred times on the wheel for imaginary crimes, finds his head on the neck of another, and carefully repulses every thing which approaches him, in order not to endanger his nose of many yards in length, which he is forced to drag along the ground. Ought we not infer, from all these phenomena, that the nature of man is rather inclined to expand into a world, exterior to its own creation, than to transport to, and concentrate, in itself, the real external world, and in this manner to excuse, in some sort, the reveries of the idealists.

Philosophers have not stopped at the period of attributing exclusively to the touch, the knowledge of the external world.

Condillac derives from touch, as from every other sense, attention, memory, judgment, imagination. He makes of it the corrcctor of all the other senses, the source of curiosity, of abstract ideas, and of all desires and passions. But he has invented so romantic a fable in relation to pain and pleasure, which he presents as the only motives of all the actions of man, that I cannot undertake the tedious task of correcting him.

Ackerman* thinks, that the touch represents impressions in more distinct series ; he regards it as the corrector of the other senses. According to him, the imperfect hand of animals is concealed in the nails or in the hoofs of the fore feet, so that they want this sense, the slowest in truth, but likewise the most sure.

Buffon† says,—It is by the touch alone, that we can gain complete and real knowledge: it is this sense which rectifies all the others, whose effects would be only illusions, and produce nothing but error in our minds, if touch did not teach us to judge.

This naturalist is so much prejudiced in favor of the advantages which result to us from touch, that, while speaking of the custom of swathing the arms of infants,

---

[*] Beantwortung de Ackerm. Wilderlelung de Gehirn und Sched elletre.

[†] Hist. Nat. 5th ed. vol. vi. p. 87.

he expresses himself thus:* One man has, perhaps, more mind than another, only in consequence of having made, from his early childhood, a greater and prompter use of this sense; and we should do well to leave to the child the free use of its hands from the moment of its birth. "Those animals," says he, elsewhere,† "which have hands, appear to be the most intelligent; monkeys do things so similar to the mechanical actions of men, that they would seem to have the same series of bodily sensations for their cause. All the other animals that have not the use of this organ, can have no very distinct acquaintance with the form of things. We may, also, conjecture that animals, which, like the cuttle fish, polypi, and other insects, have a great number of arms or claws, which they can unite and join, and with which they can seize foreign bodies in different places—that these animals, I say, have an advantage over others, and know and choose much better the things suitable for them; and that, if the hand were divided into an infinity of parts, all equally sensible and flexible, such an organ would be a kind of universal geometry."

"A single organ," says Bonnet in his Palingenesia,‡ "may have been constructed with such art, as alone to give to the animal a great number of ideas, to diversify them greatly, and to *associate* them strongly together. It may even *associate* them with so much more force and advantage, as the fibres, which are to be the *seat* of it, find themselves more strongly united in a single organ.

"The *trunk* of the elephant is a beautiful example, which will admirably illustrate my position. It is to this single instrument, that this noble animal owes his superiority over all other animals; it is by the possession of it, that he seems to hold the middle place between man and brute. What pencil could express all the wonders effected by this sort of universal instrument, better than that of Nature's painter?

---

*L. c. p. 86. †L. c. p. 82. ‡ P. 129.

"This *trunk*," says he,[*] "composed of membranes, nerves, and muscles, is, at the same time, a member capable of movement, and an organ of sentiment. The elephant can lengthen, shorten, bend, and turn it in every direction. The extremity is terminated by an appendage of the form of a finger: it is by means of this kind of finger, that the elephant does every thing which we do with our fingers; he picks up from the ground the smallest coins; he gathers herbs and flowers, choosing them one by one; he unties knots, opens and shuts doors by turning the keys, and pushing the bolts; he even learns to trace regular characters, with an instrument as small as a pen.

"In the middle of this finger-shaped appendage, is a concavity, at the bottom of which are found the common conduits of smell and respiration. The elephant has, therefore, his nose in his hands, and has the advantage of joining the power of his lungs to the action of his fingers, of drawing up liquids by a strong suction, or of lifting very heavy, solid bodies, by applying to their surface the extremity of his trunk, and forming a vacuum by a strong inspiration.

"Delicacy of touch, acuteness of smell, facility of motion, and power of suction, are found then at the extremity of the elephant's nose. Of all the instruments with which nature has so liberally endowed her favored children, the trunk is, perhaps, the most complete and the most admirable: it is not only an organic instrument, but a triple sense, whose united and combined functions are, at the same time, the cause, and produce the effects of that intelligence and those faculties, which distinguish the elephant and elevate him above all other animals. He is less subject than any other animal to the errors of the sense of sight, because he promptly rectifies them by that of touch, and because, making use of his trunk, as a long arm, to touch bodies at a distance, he obtains, like us, real ideas of distance by this means."

---

[*] M. de Buffon Hist. Nat., T. 11. p. 51. et suiv. de l' edit. 4to.

The eloquent historian of the elephant, next unites in a single view the various services, which this great animal derives from his trunk. "The touch," says he, "is that of all the senses which has the most relation to knowledge; the delicacy of the touch gives the idea of the substance of bodies; the flexibility in the parts of this organ gives the idea of their external form; the power of suction, that of their weight; the smell, that of their qualities; and the length of the arm or trunk, that of their distance: thus, by a sole and a single member, and, to use the expression, by a single and simultaneous act, the elephant feels, perceives, and judges of several things at once; now a multiplied sensation is equivalent, in some sort, to reflection; therefore, though this animal be, like all others, deprived of the power of reflecting, still as his sensations are found combined in the organ itself, as they are cotemporaneous, and, as it were, indivisible from each other, it is not astonishing, that he should have of himself a species of ideas, and that he should acquire, in a short time, those which it is desired to impart to him."

[*] Cuvier, also, thinks that the touch serves to verify and complete impressions, especially those of the sight; and as it is,[†] he says the most important of all senses, its degrees of perfection have a prodigious influence on the nature of various animals.

[‡] Herder asserts that the touch has given us the comforts of life, inventions and arts, and that it contributes, perhaps, more than we suppose, to the nature of our ideas.

According to Richerand,[§] the perfection of the organ of touch gives to elephants and to beavers a degree of intelligence which is not granted to any other quadruped, and which becomes, perhaps, the principle of their social character. If birds, notwithstanding the prodigious activity of their nutritive life, have, nevertheless, an intelligence so limited, are so little susceptible of durable attachment, and show themselves so little capable of education, do not we find the cause of it, in the imperfections of their touch?

---

[*] L. c. p. 534.
[†] L. c. p. 538.
[‡] L. c. T. p. 131.
[§] Phys. T. 2. p. 87.

According to Vicq d'Azyr, and several professors now living, the difference between the intellectual faculties of man and the monkey, is explained by the difference in their hands; because the hand of the monkey has neither extensor nor flexor; and moreover, the thumb is shorter and cannot be opposed to the other fingers.

It is thus, that, thanks to credulity, and the propensity for imitation, the old doctrine of Anaxagoras,* which taught that the hand was the cause of human reason, has propagated itself without alteration to our age, which styles itself so enlightened. Why, then, ye philosophers, have ye not raised a temple to your idol? Where would have been the enjoyments and the wisdom of your life, without the hands of a Homer, a Solon, a Euclid, a Raphael, &c.? What would your libraries have been without the hands of copyists and compilers? Whatever is marvellous in the history of animals, it is to their trunks, their tails, their antennæ, that you are indebted for it. It only remains for you to place their souls at the extremity of all these hands, these trunks, these tails, and to make them act according to the instructions of Lecat, Buffon, Condillac, &c.;† then will you have established the principle of the wisdom of animals and of men; and you will have reason to maintain, that to seek other organs to form a physiology of the brain, can only be the futile amusement of idle men, a most unphilosophic design, a sort of scientific phrensy, which has hitherto escaped being sent to the madhouse.‡

---

* De usu partium, liv. i. p. 367.
† Dumas L. c. 7. u. p. 81.
‡ Pinel, sur la alienation mentale, p. 132.

But, let us return to serious considerations, to determine the real services of touch.

We may, with the aid of attention, exercise the sense of touch, more or less, by means of all parts of the body. Still, this faculty is most perfect in the hand, because the fingers are so many separate instruments, supple and moveable; but it is not correct to say, that they are endowed with the most delicate touch. The feet, toes, tongue, and especially the lips in the horse, for example, also serve for touch in many animals. The tail of a large number of monkeys, of the beaver, the ant-bear, &c., the trunk of the elephant, the snout of the hog and the mole, the beak of birds, the antennæ of insects, the *barbillons* of fishes, the whiskers of the mammifera, serve the same use. By means of these instruments, men and animals can acquire ideas, more or less distinct, of distance, form, size, rest, or motion, solidity, heat, and cold, moisture and dryness, the weight and resistance of objects, &c.

But, are the ideas acquired by means of touch, sufficient of themselves, to establish better order in thought? Can they rectify the errors of the mind, give birth to industry, to the arts, and invention? Is the degree of perfection of the nature of animals a consequence of greater delicacy of touch? Are our intellectual faculties and those of animals, as much more numerous, as the organs of touch are more in number, and more delicate? Does a more perfect touch afford more precise and more extended knowledge? And do animals choose things proper to their preservation, with so much the more certainty as their organs of touch are more supple? Can touch produce attention, memory, judgment, imagination, abstract ideas, curiosity, desire of instruction, the appetites, and the passions? Can we regard it as the first origin of all these faculties? or, must we rather consider it as an instrument, as a means, which have been created for the service of faculties of a superior order, and put in reciprocal relation with them?

By a natural consequence of the opinions of the various writers I have quoted, should we not be tempted to believe, that the polypi, who, following the expression of some naturalists, touch the light, must have the most precise and the most extensive knowledge? Their organs of touch, so numerous and flexible, should they not lead us to hope, that we shall one day witness their geometrical discoveries? The crab, the butterfly, the capricorn, (beetle,) which have antennæ so complicated, is it through philosophic modesty, that they conceal their wisdom from us? It is unlucky, that the greater part of insects, exercise their faculties at the period when they are still imperfect, and when their antennæ are not yet developed, and that those who make use of their faculties in their state of complete development, such as bees and wasps, are inferior to the others in the beauty of their antennæ. Is it true, that the more perfect the organs of touch that animals possess, the more surely they can provide for the security of their existence? Why do not naturalists take advantage of this luminous observation, to explain the extinction of several species of animals of the primitive world? We are, probably, indebted for the existence of oysters, fishes, and horses, as they exist at present, to the care which nature has taken in the present world, to change its march, by imposing on the whole animal kingdom, the condition of consulting the smell in their choice of aliments. If the tail of the beaver, and the trunk of the elephant, are the cause of their social character and of their disposition to be tamed; if the imperfect touch of birds is the cause of their inaptitude to receive education, and their want of attachment, we may doubt whether dogs, sheep, and domestic fowls are tame and sociable animals; we may, likewise, doubt, whether the bulfinch and the black-bird, the parrot and the raven can learn, the one to sing, and the other to speak; and it will even be necessary to forget the marvellous construction of the nests of birds. If the march of thought is so mechanical, that it is the touch, which arranges the ideas in better order, because it acts slowly, separately, and successively upon objects, it would be to the sight, which, at a glance, contemplates the universe, that we should attribute the advantage of giving ideas the most prompt, the most general, and the most extended. If touch possesses the admirable faculty of correcting the errors of the mind, let us be shown a single error, moral or physical, from which the touch of man or animals has delivered us. Let the maniac, who thinks that he unceasingly hears strange voices whisper in his ear, and who is continually tormented by imaginary insects, exhaust himself perpetually in useless efforts to seize the insupportable prattler and the troublesome insect; let him, in his amorous delirium, have discovered a thousand times that he embraced nothing; the voices, nevertheless, continue to whisper, the insects to harass him, and he embraces a thousand times more, the phantom of his ardent imagination. If it be to the hands, that the origin of inventions and arts, is due, why do idiots and simpletons never invent any thing? Why does the painter let fall his pencil, the sculptor his chisel, and the architect his compass, as soon as their minds become deranged? How, on the contrary, does it happen, that men born without hands and without feet, have very just ideas of distances, forms, &c., and that other individuals, whose hands have been wholly amputated, execute surprising feats with the stumps? Why have artists, up to the present time, never found the secret of judging of the talents of their pupils, by the conformation of their hands?

Although it be true, that some muscles of the hand are wanting in monkeys, yet they can hold the smallest objects between the thumb and fore-finger; they seize the finest hairs; they grasp and carry in the same manner as men; they untie the most complicated knots, using their fingers and their teeth like men; they even employ their hind feet for all these purposes; and yet they have never invented a tool or a process of art. They do not want, any more than the dog and the cat, the ability to carry; why, then, do these animals, notwithstanding the possession of so many faculties, never arrive at the idea of carrying wood to a fire, though at the same time they are shivering with cold?

All which we have said proves, that man and animals do not perform what they execute, by means of touch, because they have this sense more or less perfect, but that it is necessary to admit, that the external organs, the senses, are calculated to adapt themselves to the internal faculties. Would there not exist a perpetual contradiction between the propensities, the faculties, and the external organs; and would not the internal faculties be rendered useless by the impotence of the external organs, if these were not fitted to execute what the internal ones command? Give to the tiger, bathed in blood, the feet and the teeth of the sheep, and to the sheep, the claws and murderous teeth of the lion, and instantly, by this contradictory arrangement of apparatuses, you destroy the existence of these two animals.

The degree of address, industry, and intelligence, with which an animal is endowed, has not for its principle his trunk, or his tail, which serves him for a trowel; man does not invent because he has hands; but the animal and the man have these organs, because their internal organization is endowed with the faculties which are in relation with these. Certain organs may be indispensable to execute certain things; yet we cannot attribute to them the thought, which leads to constructing a nest or a hut; to the invention of printing, or weaving.

It is the more astonishing, that this error of Anaxagoras should have been preserved to the present moment, since Galen had long since victoriously refuted it.

"The body," says he, "is the organ of the soul, and, consequently, all the limbs are useful. Hence, the limbs are different, because the souls themselves are of different natures. The courageous and audacious lion has strong claws and teeth; the bull is armed with horns; the boar with tusks. The timid animals, such as the stag and the hare, are organized so as to withdraw

x I am positive, Gall has [illegible] the doctrine of Anaxagoras themselves from danger by a prompt flight. Man, being endowed with something divine, with intelligence, has received from nature his hands, instead of weapons and tusks. These instruments serve him for all acts, both in war and in peace. There is no need of either horns or tusks; by means of his hands he procures himself shoes; the cuirass, the lance, his arrows: he constructs walls and houses, weaves cloths and nets, and, in this manner gains possession, not only of the animals which inhabit the earth, but also, of those which glide in the air, or skim the seas. With his hands he writes laws, erects temples and statues, constructs vessels, makes flutes, harps, knives, pincers, and all instruments needed in the arts. It is by them, that he transmits his meditations to posterity, just as, at the present moment, he can converse with Plato, Aristotle, and Hippocrates. The hands, therefore, were most suitable to man, as an intelligent being; for, he is not the most intelligent being because he has two hands as Anaxagoras maintains; but, he is provided with hands because he is the most intelligent; as Aristotle had already, with reason, advanced. It is not the hands, which have taught men the arts; but it is his understanding. The hands are only instruments for the arts; as it is not the harp which instructs the musician, nor the tongs which make the blacksmith, but both are artists, only, by the aid of their intelligence, though without these instruments they would not be able to exercise their art; so each soul, by virtue of its peculiar nature, possesses certain faculties, though it cannot manifest them without certain instruments. It is especially by observing the young of certain animals, that any one may convince himself, that it is not external instruments which inspire an animal with timidity, courage, or sagacity; for, young animals are already endeavoring to exercise their innate faculties, before their innate faculties have reached their perfection. I have often seen a young bullock making at objects with his forehead before the horns had appeared; a colt kick with his still feeble feet; a young boar without tusks carry on a combat with blows from his jaw. Each animal has the internal sense of his faculties, and knows the use of his weapons, independently of all instruction. If it were otherwise, why should not the young boar bite with the teeth which he already has, in place of attempting the use of tusks, which he has not? If you have three eggs hatched, one of an eagle, one of a duck, and one of a serpent, you will see the eagle and the duck try to fly before they possess any wings; the little serpent, on the contrary, will roll himself into a spiral, and, however feeble he may be, will make efforts to crawl. If you bring them up in a house, and then take them into the open field, the eagle will direct his flight to the heaven, the duck will make for the water, and the serpent will hide himself under the grass. The eagle, I think, will not fail to *pursue his prey;* the duck, to swim; and the serpent, to seek for holes in the earth; all, as I conclude, without having been taught by any master."

We see, also, by this, that a similitude of occupation exists among several animals, although their organs may differ entirely; or, that similar internal faculties obtain their common object by means of external organs totally unlike. The trunk is to the elephant, what the hand is to the man and the monkey; the swallow attaches its nest by the means of his beak, and the thrush cements the interior of his, with clay, tempered by the same instrument, in the same manner as the beaver covers his habitation with it by means of his tail. The squirrel and the wren, the swamp-thrush, and the reed-mouse, build their nests in a manner almost similar. The eagle holds his prey between his talons, as the dog does a bone with his paws. Whatever difference exists between the hands of the monkey, and the feet of the parrot, and the Polish titmouse, (parus pendulinus,) all three make use of these parts to hold their food in the air in the same manner; the hog roots the earth with his snout, the dog scratches it, and the stag beats it with his feet, to uncover the truffles.

In like manner, phenomena entirely different, result from organs apparently similar. In how many different modes, and with what variety of toils do the different species of spiders seize their prey? What diversity of structure exists in the nests of birds? Even those who construct similar ones, and which belong to the same genus, how much do they differ in their mode of life, in habitual residence, in their food, their notes, and other distinctive peculiarities? The great tomtit, (*parus major*,) for example, builds his nest in hollow trees; the long-tailed tomtit, (*parus caudatus*,) in the bifurcations, and between the bark and the trunk; the bearded tomtit, (*parus barbatus*,) in the reeds; and the titmouse suspends his nest, remarkable for its art and delicacy, from a slender branch; while the cuckoo, though provided with a beak and feet like other birds, builds none.

We challenge those, who assert that the external organs produce the internal faculties, to form a conjecture of any faculty from the configuration of these organs. What would lead you to conclude, that the ant-lion digs a reversed cone in the sand for the ants to fall into? What reveals to you the reason why the hare has his covert in the midst of the fields, while the rabbit burrows? What sign shows you that the rook must live in society, while the pie lives in insulated couples? How do you distinguish the natural wildness of the cuckoo and the chamois, from the facility with which the pigeon and the goat are tamed? Would you not rather have attributed the faculty of building to the hands of the curious monkey, than to the feeble and palmate feet of the beaver? Would you not make the weak wren migratory to the south, rather than the vulture? How will you discover why the hamster lays up food for the winter, and why the bustard, crane, &c., set sentinels?

Thus have I demonstrated, that it does not belong to the touch alone, to give us a knowledge of the world without us; that sensations take place, not only by means of the external senses, but likewise in the interior of the organization; that we cannot call the touch, the corrector of the other senses; that the hands, when there exists no faculty of a superior order, cannot invent either arts or tools; that the whole use of the touch is limited to procuring the ideas of distance, extent, form, rest, motion, moisture and dryness, and the degree of solidity of objects; that, in other respects, it must be regarded as the instrument of the superior faculties; that these superior faculties, such as the inclinations, propensities, different modes of industry, and the faculties, cannot be determined, conjectured, or explained by the organs of touch. We are, then, obliged to seek other organic conditions, as the causes of all the faculties which we cannot derive from this sense.

It is alleged, as the cause of the numerous advantages of touch, that it supposes a reflection in the animal that exercises it, whereas the others require none. "Light," say they, "and sounds, strike their respective organs without the will of the animal; whereas he touches nothing without some preliminary exercise of the intellectual faculties." *

But this opinion, which embraces only one side of objects, disregards the *active* functions of the other senses; and, as it excludes, at the same time, the involuntary touch and shock, and, consequently, the *passive* function of touch, it does not deserve any more extended refutation.

We may place in the same category, the directly opposite opinion of Dumas,† who says, "the perceptions from touch do not leave after them impressions as definite, as lively, and of which the memory can so easily recal the image."

To this objection, those may answer, who are under the sad necessity of indemnifying themselves by the pleasures of the imagination only, for the loss of those gratifications which they have formerly had from the sense of touch.

---

* Bichat, Anat. Gen. T. i. p. 117.

† L. c. T. iii. p. 435.

Of the Functions of the Senses in general.

The impressions, whether they come from the external world through the senses, or from the internal by the general organs of sensations, must, then, be considered as indispensable conditions, without which no perception and no thought can take place. But, no impression from without, no irritation from within, can become a sensation or an idea, without the concurrence of the brain. The faculty of perceiving impressions, of retaining and comparing ideas, and making application of them, is by no means in proportion to the senses either in men or animals, as is proved by the example of idiots and simpletons. Thus, could we even have it demonstrated, that man, of all animals, has the most perfect senses, we should not thus obtain the explanation of his surpassing all others in intellectual faculties. Accordingly Condillac* has been obliged to say, "that the senses do not suffice to obtain a knowledge of nature; for the same senses are common to us all, yet we have not all the same knowledge."

The author† of the treatise on the senses is, therefore, wrong in saying, "all the senses have, likewise, produced the arts to satisfy, to perfect, and to guard themselves from painful impressions. What arts has not the sense of touch produced? These dresses, these palaces, these convenient carriages, are all the creations of its delicacy."

We shall oppose to him an observation of Helvetius, much more judicious. "Experience,"‡ says he, "does not show that the mind is always proportionate to the greater or less delicacy of these same senses. Women, for example, whose skin, more delicate than that of man, gives them greater acuteness in the sense of touch, have not more genius than a Voltaire, &c. Homer and Milton were blind at an early age; but what imagination can be stronger and more brilliant? Among those whose sense of hearing is most acute, are any superior to S. Lambert, Saurin, Nivérnois? Those, whose senses of taste and smell are the most exquisite, have they more genius than Diderot, Rousseau, Marmontel, Duclos, &c.? In whatever manner we inquire of experience, she always answers, that the greater or less superiority of mind, is independent of the greater or less perfection of the organs of the senses."

---

* Œuvres compl. T. iii. p. 6.

† Lecat. p. 31.

‡ De l'homme, de ses facultés intellectuelles, et de son éducation. Lond. 1786. T. i. p. 185.

To prove still more amply that all our ideas come from the senses, it is said, with Locke,* that the very expressions for the peculiar functions of the understanding are borrowed from material objects. "The words imagine, comprehend, attach, conceive, instil, disgust, trouble, tranquillity, are all borrowed from the operations of sensible things, and applied to certain modes of thought." And with him it is asserted, that, in all languages, the words employed to express things not within the domain of sense, have derived their first origin from similar ideas. In this sense is continually repeated the maxim of Aristotle, *that nothing arrives at the mind without having passed through the senses.*

I am, myself, convinced, that many expressions which serve to designate internal acts, are borrowed from the external world. But, if we have established a comparison between two sensations, does it follow that it was external impressions which produced these similar internal sensations? It seems to us rather, that, in a great number of cases, it is difficult to decide whether a certain expression has first been invented for an internal sensation, or for an external impression; for man is alive to himself, as early as he is to the external world, and acquires sensations and ideas from within and without at the same time. It was necessary to designate the motion and rest of the eyes, of the tongue, as well as the motion and rest of an animal; the heart beats as well as a hammer; a stone does not oppress us more than heavy undigested food weighs in the stomach; the painful feelings of distress, pricking, dragging, tearing, and distortion, may affect us from within as strongly as when they are the result of external impressions. Who, then, will dare assert that the expressions, *strain*, *cold*, *warm*, *chill*, *palpitation*, *trembling*, &c., have been designed to designate rather the qualities of external things, than those of internal sensations?

---

* L. c. Tom. iii. p. 40.

There exists, also, in every language, a number of expressions, which it would be difficult to derive from material objects. Whence comes the words *hunger*, *thirst*, *truth*, *falsehood*, *error*, *friend*, *enemy*, *hatred*, *love*, *pride*, *honor*, *sin*, *evil*, *good*, *wish*, *think*, *joy*, *grief*, *fear*, *hope*, &c. They serve to revive our internal sensations, and we employ them frequently to depict what passes in the external world. We say that a country is *sad*, that a house *threatens* to fall, that the excessive heat does *mischief* to the trees, &c.

Whence come the words which do not precisely designate determinate ideas, but simply the mode of thinking; the prepositions, conjunctions, interjections, adverbs of interrogation and exclamation, &c., such as *but*, *and*, *yet*, *notwithstanding*, *for*, *if*, *nevertheless*, *consequently*, *also*, *then*, *thus*, *alas*, *yes*, *no*, &c.?

Do not the deaf and dumb, who possess reason, but who are deprived of the faculty of expressing themselves by articulate language, depict their internal sensations by gestures, which absolutely have nothing in common with the external world?

If all our ideas come from the senses, what becomes of the general and purely intellectual ideas, whose signification is wholly independent of the material world? For example, "there is no effect without a cause;" "nothing can spring from nothing;" "matter can neither be increased or diminished;" "a quality, contrary to a subject, cannot belong to it;" "a thing cannot exist and not exist, at the same time."

In fine, I have already shown in my large work, in speaking of hearing, that the faculty of finding analogies between impressions from without and those from within, supposes a faculty of a degree superior to that of articulating words.

Language, then, also proves, in all its relations, that it is not solely the work of the impressions on the senses, but that it supposes an internal and an external source of our sensations and our ideas, and, at the same time, an intellectual faculty much superior.

Some authors, persuaded that the impressions on the senses do not suffice to explain all the faculties of animals and of man, admit an internal and an external source of our ideas, and say, with Cabanis, Richerand, &c., that our ideas come to us from two very distinct sources, to wit, the external senses and the internal organs; that instinct arises from impressions received from the internal organs, while reason is the product of external sensations. They also add, that "in animals, the grosser external senses allow instinct to predominate, and that in man, the perfection of the senses gives to the reasoning a marked preponderance, at the same time that it weakens instinct."

But this mode of expression again supposes the error, that man has senses more perfect than animals; and, as, on the other hand, we generally attribute to savage nations the most delicate senses, it would be from them that we ought to expect the most profound philosophy and the feeblest instinct; which will hardly be admitted. But, we must first agree what instinct, properly speaking, is. If, moved by different principles, man is better able to govern his passions than the animals, it does not at all follow, that those passions or instincts are more feeble. In fine, the propensities, the inclinations, the passions, are as much objects of consideration for reason, as the impressions made on the senses; these, also, have need of internal organs, when they do not remain simple material impressions; and must be employed by the understanding for higher functions. The eye and the touch, alone, no more form geometry, than the female creates in the male the instinct of generation, or, than the sheep is the cause of the carnivorous appetite of the wolf.

It is said to have been remarked in the man of Puiseaux, blind from his birth, "that the wonders of nature and the course of the stars, did not induce in him a belief in God, because he was unable to perceive them; that the same blind man had no aversion for theft, except for the facility with which others robbed him without his knowing it, and the difficulty he found in retaliating on others without being detected; that he cared not much for decency; and felt not much commiseration for a man whose blood was flowing." By such examples they would make it appear, that we are indebted to the senses even for our moral faculties.*

But, have those animals who possess all the senses which we do, such as the baboon, and ourang-outang, have they more decency, and are they more moved in seeing blood flow, than other animals? Are idiots, who possess their five senses in perfection, more virtuous than the man born blind? Must not every reader perceive, that it is the interior alone which modifies the impressions on the senses, and thus leads us, by a precipitate and limited judgment, to believe their operation immediate? It is for this reason, that external objects act very differently on men and on animals; very differently on the hare and on the fox; on such or such an individual, &c.

The differences of seasons, ages and sexes, produces no essential difference in the number and nature of the senses; why, then, are the intellectual faculties and the passions so different in the child, and in the man, in the young man and in the young woman? How does it happen, that, in animals, it sometimes is the inclination to assemble in flocks and travel, and sometimes, the desire to propagate the species, that predominates? Why does the same bird feed on seeds, in one season, and on worms, in another?

---

* Diderat L. c. p. 126 et suive.

All the functions of the senses are gradually weakened in old age. According to some physiologists, this is the consequence of the senses being habituated to external impressions, so that these successively produce feebler irritations. It is even attempted to explain on the principle of habit, why we have so little feeling of what passes within us in the organic or automatic life. It rather seems to me that nature has designedly taken from us the sense of automatic life; and she has probably attained this end by the tenuity of the threads of communication of the nervous systems of the chest and abdomen, with the nervous systems of the vertebral column, the senses and the brain. But in old age, the functions of the senses are weakened, because the organs of sense themselves diminish. The nervous filaments and their nutritive substance waste, as well as the gray substance generally, and all the nerves begin to experience atrophy. This is the reason why Pinel did not find in the labyrinth of the ear of old men who had become deaf, the pulpous substance, which exists in men who hear. This, too, is the reason why the nerves of aged persons are much smaller, than those of persons in the prime of life. This diminution not taking place at the same time in all the nervous systems, it hence results, that all the functions do not diminish equally at the same time; which must happen if they successively become more feeble, only in consequence of the repetition of impressions.

The double nature of each sense does not prevent the sensations we have of objects from being simple; the consciousness of the soul is likewise simple, notwithstanding the five different functions of the senses.

Bacon, Locke, Hume, Helvetius, Condillac, have found themselves obliged, in order to comprehend in some way, the possibility of the functions of the understanding, to have recourse, not only to the senses which some of these authors had so highly elevated, but likewise to a knowledge of the relations of sensations, or sometimes to attention, experience, reflection, induction. Though they were sometimes greatly in contradiction with themselves, they perceived that none of the faculties which we have just enumerated, could pertain to any of the senses. But if, in this life, no faculty can be exercised without a material condition, as I shall show hereafter in an incontestable manner, we must necessarily suppose a material organization for the exercise of the intellectual faculties.

Men have always regarded, as very important, the researches, which have for their object to determine the organs, by which animals and man receive the material impressions of the external world. Will it be less interesting, less noble, to try to discover the organs of the superior faculties of the mind?

In fine, I will ask, if the five senses, and the faculties of which we have spoken, can serve to explain the various inclinations, the different instinctive aptitudes of animals, as well as all the propensities and all the powers of man; how, by this means, will you explain why the seal, the chamois, and the wild goose place sentinels? Why the bird, the beaver, the rabbit, the ant, construct their abodes with so much skill? Why the quail and the stork migrate and return to the same places? Who can explain to us the love of females for their young, and the indifference of the males of many sorts of animals, while in other species, the males share with their mates, the care of the young? Who can explain to us the sociability of the rook, and the inclination of the pie to live in solitude? the exclusive jealousy of the cock and the bull, and the reciprocal compatibility of hens and cows? Who can explain to us what we call cunning, courage, boldness, rectitude, morality? Is it experience? But all these sentiments precede experience. The spider weaves, the beaver builds, the nightingale migrates, before having any experience. Is it attention, reflection, induction? But why does each species of animal direct its attention to a different and peculiar object? Why do all individuals of the same species fix theirs always on the same object? Why, even, does it not depend on man to acquire a high degree of attention or faculty of induction for certain objects? Do we not see that it is in all nature, as in the example of the monkey, who has attention sufficient for filling his pouches with fruits, but knows not how to keep up a fire?

Education perfects, deteriorates, represses, and directs the Innate Faculties, but can neither destroy nor produce any.

Since we have ventured to regard animals no longer as mere machines, many philosophers maintain, that not only man, but animals also, are born without instincts, propensities, primitive determination, faculties; that they are indifferent, equally susceptible of every thing; and, finally, that we must regard them as tabulæ rasæ. Their ingenious aptitudes, instincts, propensities and faculties, it is pretended, are the result of accidental impressions, received by the five senses, or of those which education gives them. Even insects, say they, display their natural aptitudes only as an effect of instruction. The builder-wasp has already learned, while yet a larva, the masonry of his mother; the bird learns from those who have given him life, to build his nest, to sing, to migrate; the young fox is carried to school by his father; and man would not become man, would remain a savage and idiot, without the means furnished by education.

Let us first examine this hypothesis, so far as it concerns animals.

It is true, and I shall give numerous proofs of it in this work, that the great part of animals are not limited wholly to the means of their own preservation. They are susceptible of much more extended instruction, than their immediate wants require. We teach all sorts of tricks to birds, squirrels, cats, dogs, horses, monkeys, and even swine. They also modify their own mode of action with reference to the position in which they find themselves. But, this faculty of receiving education is always proportionate to their primitive faculties; and they cannot, any more than man, learn things, of which they have not received the first impress from nature. I admire the setter, couching in the pursuit of the pheasant; the falcon in chase of the heron; but the ox will never learn to run after mice,* nor the cat to browse on grass; and we shall never teach the roe-buck and the pigeon to hunt.

If animals were susceptible of impressions from all that surrounds them, in a manner to derive lessons from them to the degree supposed, why does not the chicken learn to coo with the pigeons? Why does not the female nightingale imitate the song of her mate? How does each animal, notwithstanding the intercourse of other species, differing the most from his own, preserve his peculiar manners? Why do birds and mammifera, even when hatched or suckled by strange parents, always manifest the character of their species? Why does the cuckoo imitate neither, the nest where he is hatched, nor the note of the bird who has reared him? How do we teach the squirrel which we have taken blind in his nest, and who has never seen another squirrel, to climb and leap from one branch to another? How do we inspire the ferret with the instinct of seeking the rabbit in his burrow? Who has taught ducks and beetles to counterfeit death, as soon as they are menaced by an enemy? Who has given lessons to the spider, which, hardly escaped from his egg, weaves a web and envelopes the captive flies, that they may not dry up? Of whom has the ichneumon fly learned to attach with a thread to the branch of a tree, the caterpillar, in which

I have seen cat with mine own eyes eating
grass. — The reader.

she has deposited her eggs? And how do the caterpillars, as soon as they are hatched, roll themselves in a leaf to escape the cold and dampness of the winter? In fine, why do animals do things, which they have never seen done; and why do they almost always do them as well the first time, as their progenitors?

Without the innateness of the faculties of animals, how can we explain the differences of individuals, which have absolutely the same manner of living? When, in a forest, one nightingale sings better and more assiduously than the rest; when in a poultry yard one cock is more ardent in fight, and another more pacific; when one hen, one cow, are better mothers than the other hens and the other cows,—can we attribute these phenomena to education?

How can we comprehend why certain individuals are raised above their fellows, and become, as it were, the geniuses of their species? Locke's translator, Coste, speaks of a dog, who, in winter, whenever his comrades were lying about the fire, so as to prevent his approach, set himself about making a noise in the court; and while his comrades ran thither, he hastened to enter into the house, took a good place near the fire, and let those bark whom he had cheated by this stratagem. He had frequent recourse to it, and yet he always gained his ends, because no one of the other dogs had sagacity enough to discover his trick. Dupont de Nemours had a cow, that, to procure the whole flock a more abundant supply of food, adopted the plan of throwing down with her horns, the fence with which the field was surrounded. None of the other cows knew how to imitate her example; and when they were near the fence, waited impatiently the arrival of their conductress. I have sometimes met mocking-birds who perfectly imitated the birds of the neighborhood, even to the quail and the cuckoo, while the others surrounded by the same birds, could only imitate a small number, or were limited to their own peculiar song.

In fine, if the instincts, propensities, and faculties of animals, are not determined by their organization, how can you explain the fact, that these instincts, propensities and faculties are always found in harmony with their external organs? What chance should give to each animal, factitious instincts, faculties, always in harmony with their teeth, claws, horns, &c.? Will you maintain that nature acts without object, in giving to the beaver strong gnawing teeth and a flat tail; to the intelligent elephant his trunk; to the sanguinary tiger his terrible claws and teeth?

Or, will you tell me, with those who do not acknowledge final causes, that the bear, the tiger, and the elephant employ their instruments for the sole reason, that they find them fitted for certain purposes? the mole lives under ground because her eyes are too small; the feet of the swan are natural oars, and therefore he chooses of necessity his abode in the water. Neither man nor animals have any limb, any instrument, in order to use it, but they use them because they have them.

Who does not see that, on this supposition, there would be no connection between the interior and exterior, between the instruments and the active force? And would you forget, that the boar strikes with his jaws before his tusks are formed? the young bull and the kid with their head, before their horns have appeared? that the bird shakes his wings before he has any feathers? Take from the lion his teeth and claws, and give them to the sheep, and see if by this means you will change the lion into a sheep, and the sheep into a lion.

We must then admit, that each animal, in consequence of its organization, has received from nature ingenious aptitudes, instincts, propensities, proper determinate talents, and that the power of things external, of instruction and education, is limited to giving it more or less modification.

The hypothesis of the tabula rasa, and of the creative power of education, is it more admissible for the human race?

To attempt to write in a satisfactory manner on the influence of institutions and of education, would be undertaking volumes. I must therefore confine myself to my object, and show, by some general considerations, how far the influence of human efforts extends over the moral and intellectual character of man.

The antagonists of innate dispositions persist in saying, that man, being from his birth surrounded by men, appropriates to himself their faculties and their character.

Might I not ask whence the first men, who were surrounded only by beasts, obtained their faculties, and how they created or invented them? Even at the present time, are not many men, in their infancy, more surrounded by animals than by men? Why do not these children receive the instincts and propensities of animals as well as the faculties of man? If children had not the same dispositions as their parents and instructors, how could they be capable of receiving their instruction and profiting by their example? In the first years, when children are almost solely in the hands of their mothers, of nurses, and of women, boys always distinguish themselves from girls, and one child is perfectly distinct from another. After this period nothing can give rise to a resemblance between the faculties of the man and the woman, nor between those of different individuals. In fine, do we know any art by which an instructor can create in children envy, love, attachment, anger, goodness or wickedness, ambition, pride, &c.? Do we know how to create any talent? This power so little belongs to man, that even when we are our own absolute masters, we cannot escape the changes which the succession of years produces in our moral and intellectual faculties. Every thing confirms the truth of what Herder says, that education cannot take place except by imitation, and consequently by the passage from the original to the copy. The imitator must have the faculty of receiving what is communicated to him and of transforming it into his nature, as he does the meats

yes, Christianity! Teacher [illegible]
hypocrisy, and no true Christian [illegible]
is not a person who does [illegible]

by which he is nourished. But the manner in which he receives it, the means by which he appropriates it to himself and employs it, can only be determined by the faculties of the receiver; whence it follows that the education of our species, is, in some sort, the result of a double action, to wit: of him who gives, and of him who receives it. Thus when we see that men take the form which we wish to give them, it is not a legitimate inference, that these forms have been created in them; they have borrowed them from other men endowed with the same dispositions.

The influence of education, instruction, example and of surrounding circumstances, takes place principally when the innate dispositions are neither too feeble nor too energetic. Every sane man, having the essential organization of his species, has, in virtue of it, capacity for whatever is relative to the dispositions proper to man. It is owing to this, that nature bounds herself in the most part of individuals, with a mediocrity of moral and intellectual forces; it is, as it were, passive in relation to the impression of external objects; the internal faculties do not announce themselves; they are in a state of indifference; they seize nothing and repulse nothing strongly; and as nothing draws these individuals toward a marked end, they have consequently no determinate vocation. Of this great majority of men it is said, with reason, that man is an imitative animal. Precepts, institutions, discussion, the severe exposition of the most interesting truths, has but little power over them. It is example and imitation which draws them, which gives a grave air, and often a grave character to the son of a magistrate, and the bold countenance to the son of a warrior; which make the Frenchman, German, Italian, Englishman, Russian; which make slaves, freemen, republicans, &c.: but it will always be mediocrity which falls to their share. It is for these men that education is almost every thing, at least in the relations of social life; it is for them that institutions must be calculated. Still, it is not admissible to conclude, that their dispositions for receiving this education, are not innate. When Helvetius maintains, that if dispositions were innate in man, education would not be able to change any thing in him, not to give him any thing, he takes from the nature of man and of animals all possibility of being modified, and confounds simple modifications with essential qualities and faculties.

Still, it must not be imagined, that even for this class, the impressions which come from without, have an influence exclusive, absolute, and always equal. If we succeed in introducing in a nation a certain uniformity in regard to customs, opinions, manners, professions, arts and sciences, laws and religion, it is because all these things are founded, not only on positive relations, but also, on natural dispositions. Without denying the influence of institutions, it is still evident that the general progress of civilization is the result of the organization proper to the human race.

In the midst of these positive things, which seem to have been introduced by institutions, by arbitrary inventions, each individual differs from another by a peculiar character, just as he differs by the external form of his body. Such a quality is given to one, and denied to another. Each has a predilection, or a more decided talent for such or such an object. There is, then, in each man, something which he does not derive from education, which even resists all education. Accordingly, all instructors have experienced, that it is necessary to observe peculiar rules for each pupil, if they would perfect the good qualities and correct the evil ones which belong to him, and put him in a state to employ his powers in a manner useful to society and himself.

This individuality, this character peculiar to each individual, shows itself in a thousand modes at all periods of life, without education having any part in it. From his infancy, man announces the character which will distinguish him in adult age. The moment you exalt his merit on account of some excellent quality, or censure him for a vicious one, he appears to be surprised himself, as by some new thing, of which he acquires a knowledge for the first time. Urge him still more, and he exclaims, "*Well, it is in my nature: I cannot do otherwise; it is too strong for me.*" Let us follow, then, the example of Marcus Aurelius, who holds it for a maxim,—that it is not in our power, nor in that of a sovereign, to make men such as they ought to be; but that it depends on us and on the prince, to employ men, such as they are, each according to his talent.

How can we attribute to education those most decided dispositions and faculties, which are sometimes observed, even in children, and which, consequently, are anterior to all sorts of instruction. Most great men have manifested their future greatness in their early years. Achilles, concealed under the robes of Pyrrha, seized a sword from among the gifts which Ulysses brought: Themistocles, when still a child, said, that if they would give him a small town to govern, he would know how to enlarge it and render it powerful: Alcibiades, seeing that a carman was going to disturb his game of cockles, throws himself across his path, in the middle of the street, and cries out to him, "*Come on, if you dare*:" Alexander would not contend for the prize in the Olympic games, unless kings were to be his rivals: it was at the age of fourteen years that Cato of Utica developed his great character, and his horror of tyranny; and Pascal, at twelve, gave evidence of his genius, by publishing his treatise on Conic Sections.

Experience proves the small power of education, when we have to deal with energetic dispositions. Men, endowed with striking characters and superior intellect, push on and raise themselves, notwithstanding the greatest obstacles. Moses, David, Tamerlane, Pope Sixtus Quintus, had been keepers of flocks; Gregory VII. was the son of a carpenter; Socrates, Pythagoras, Theophrastes, Demosthenes, Shakspeare, Moliere, J. J. Rousseau, were the sons of artisans. These examples, with which history abounds, refute Hobbes, who holds that the difference of talents, or, of mental faculties, comes from wealth, power, and the condition in which one is born.

We even observe, that, in spite of the most decided opposition, and education, the most hostile to the innate character, nature, when endowed with energy, gains the victory both in the good and the bad. Tacitus justifies the instructors of Nero. This prince was cruel from infancy, and to all the lessons of humanity which his masters gave him, he only opposed a heart of brass. Philosophers and sages cultivated the heart and mind of Commodus; but nature triumphed over education: men saw in him a second Nero. The energy of the character of Peter the Great could neither be enervated by the corrupt principles with which he was surrounded, nor by the pleasures by means of which, at a tender age, it was attempted to lead him into effeminate habits.

The greatest men, it is true, bear the impress of their age, and cannot entirely defend themselves from the impression of the objects which surround them; still, we constantly see, that he who possesses a dominant energetic quality or faculty, pursues his route, and seizes with force the object which nature has pointed out to him. Thomas, in writing the *èloge* of Descartes, did well not to dwell much upon his education. "For," said he, "when the question relates to extraordinary men, we have to consider education much less than nature. There is an education for common men; the man of genius has the education which he gives himself, and which consists principally in destroying and effacing, that which he has received." Fontenelle, in pronouncing the eulogy of the czar, said,—"Neither does good education make the great character, nor does bad education destroy it. Heroes, of all classes, come ready formed from the hands of nature, and with uncontrollable qualities."

Almost all great men have either been educated by inferior masters, or have received no education whatever. Homer, Petrarch, Tasso, Dante, Raphael, Michael Angelo, Racine, Moliere, Corneille, Titian, Rubens, Poussin, &c., are instances.

It is rare, that great masters form great men. What, then, must we think of the public, that honestly consider it the best choice of a physician, when the individual selected is the pupil of some celebrated professor?

But geniuses of all kinds, say the antagonists of innate propensities, make an exception, and form a separate class; we cannot from them conclude, that the qualities and faculties are innate.

I answer, that genius is only the energetic activity of some quality or some faculty. If, then, in cases where the faculties have the greatest energy, the cause which produces it, and which is most striking, is inherent in the organization, we must naturally conclude that the cause of their ordinary activity is equally founded in the organization. Difference of more and less proves nothing against the common origin of obscure and decided faculties. Otherwise it would be correct to conclude, from the piercing sight of the eagle, and the delicate scent of the dog, that the sight of the mole, and the sense of smell in man, do not likewise depend on their organization.

If, by a concurrence of circumstances, a man endowed with certain very active faculties, has been prevented from following his inclination, this dominant faculty or propensity determines the enjoyments and the favorite occupations of his life. Kings devote themselves to the occupations of artists and of artisans; peasants, cordwainers, weavers, shepherds, become astronomers, poets, philosophers, actors, sculptors. The czar Peter I. exercised the mechanical arts from inclination. Louis XIV. turned locksmith for amusement. The shepherd Hahn made watches; and Haller, in the midst of his anatomical and physiological works, became likewise celebrated for poetry.

Will it be pretended that precocious genius, or any other genius, is the result of education and of surrounding objects? I would then be informed why certain children, who, in regard to one of their faculties, exhibit extraordinary genius, in other respects do not raise themselves above their companions; and why men, who excel in one point are so indifferent in every thing else? The celebrated Betty, who at the age of thirteen, was already regarded a first-rate actor, used to play in the street with his companions, up to the moment of his appearance on the stage. William Crotch, celebrated at the age of six years, for his musical talents, was, in other respects, a child of only moderate abilities.

I have made the same observation on a boy of five years, who gave evidence of complete puberty and the most decided propensity for women; he had nothing to distinguish him from children of his age, in all his other inclinations. The same contrast is remarkable in adults. The most extraordinary faculties prove nothing in favor of qualities of a different order. Nothing could have made a Horace of Cæsar, or a Homer of Alexander. Helvetius, himself, is forced to confess that education would never have changed Newton into a poet, or Milton into an astronomer. Michael Angelo would never have been able to compose the tables of Albanus, nor Albanus those of Julius Romanus. We can only explain these various phenomena by saying, that certain organs perfect themselves sooner, and others later; that, in certain individuals, some organs remain always in arrear, while others acquire the greatest energy. But this explanation shows again, that all the moral qualities and intellectual faculties are innate.

Philosophers have recourse to small subterfuges to prove, that our propensities and our talents are the result of chance. It is, they say, by insignificant impressions on the infant at the breast, by peculiar examples and events, that sometimes one faculty is determined and sometimes another. If Demosthenes became eloquent, it is because he was attracted by the eloquence of Callisthenes. If Vaucanson became celebrated in mechanics, it was because he had seen, while a child, a clock in the ante-chamber of his mother's confessor; he examined its wheels, made a similar machine with a bad knife, and, his taste developing itself, he soon constructed an automaton flute-player, and the most astonishing machines. Milton would not have written his poem, had he not lost his place of secretary to Cromwell. Shakspeare made tragadies in consequence of being an actor; in place of being an actor, he would have remained a wool-dealer, like his father, had not some youthful follies compelled him to quit the place of his birth. Corneille falls in love, and writes verses to the object of his affection; it is to this circumstance that we owe this great dramatic poet. Newton sees an apple fall; what more was wanting to enable him to divine the laws of gravitation.

I admit these facts. All that can be concluded from them is, that our propensities and our talents do not always put themselves in activity; that it is often necessary, that the impulse be given them by an external impression, or that the material object, on which they are to exercise themselves, be offered them. The cock will not fight, unless he finds a rival to thwart him in his love; the beaver does not build, if he has no branches of trees; no animal can generate without a female; without obstacle, there can be no firmness; without an enemy, no generous pardon. In all ages, great events have given rise to great men; not that the circumstances produce their intellectual faculties, but because they furnish an ample field for the free exercise of their faculties. Many men, without doubt, acquire, only by this means, a knowledge of their own genius; but if, sometimes, certain qualities remain at first inactive, for want of circumstances, the force and solidity which these faculties afterward display, fully satisfy us that their existence had preceded their action. Is it not evident, that, in the very examples opposed to me, the objects offered by chance, would not, without the peculiar disposition in question, have been seized as they were, nor with the same energy? How many are the children on whom works of art make little impression, or whom the view of these works does not render artists?

Vaucanson directs a fixed attention to the arrangement of the clock; he examines it with much care; the first trials he makes to imitate it, with bad tools, prove successful; now, this attention and this rapid success, prove that there existed a relation between his faculties and the mechanic arts. Thucydides shed tears of envy at the reading which Herodotus gave of his history, to the Greeks. It certainly was not this perusal, which created in him a concise, close, lively style, strong and rich in thoughts. Neither was it the reading of the poem of the Death of Henry IV. which inspired Fontaine with his peculiar talent for poetry. How many secretaries lose their places without becoming Miltons! How many are in love, and write verses like Corneille and Racine; yet these poets have found no equals among their successors.

If the most frivolous accessary circumstances produce striking differences in propensities and talents, why does not education, which can produce circumstances at will, seize this new means of forming great men? And why have we, and shall we always have, reason to complain that, notwithstanding so many establishments for education, great men are so rare a phenomenon?

I certainly do not deny, that good models are of great utility, and that the study of these models ought to constitute an essential part of education; but, if it be necessary, or sufficient, to have excellent subjects of imitation, whence have Homer, Petrarch, Dante, drawn their divine art? Why do not the talents of Tacitus, Cicero, and Livy, find their inheritors, though so many scholars know these authors by heart? The Raphaels, Mozarts, Haydns, why do they produce so few disciples? And why do we always need to await a lapse of several ages, before we can see any great men shine in the annals of history?

Again; an objection is drawn from the uniformity which is found among men, on a hasty survey of all the individuals of a nation; and from this, it is concluded, that the faculties of mankind are only a result of social institutions.

But this uniformity proves precisely the reverse; for, we find it in essential things, not only in a single nation, but in all people, in all ages, however different may be the external influences of climate, of nourishment, laws, customs, religion, and education. It even preserves itself in all the individuals of the same species of animals, under whatever climate, and whatever external influence. This uniformity is, consequently, the strongest proof that nothing can derange the plan, which nature has prescribed by means of organization. For the rest, these panegyrists of the creative power of education, are in direct contradiction with themselves. At one time, the uniformity observed among men, serves to prove that education does every thing; at another, in order to explain the difference in characters, they allege the impossibility of the greater part of individuals receiving a uniform education.

In fine, let us consult persons who devote their whole life to the education of men ; such as Campè, Niemeyer, Pestalozzi, Salzmann, Gediké, May, Eschké, Pfingsten, the abbè Sicard, &c. Every day furnishes them occasion to remark, that in each individual, dispositions differ from birth ; and that education can have no effect, except in proportion to the innate qualities: if it were otherwise, how could these benevolent men be pardoned, and how pardon themselves, for not rooting out, in their pupils, all the faults, vices, all their fatal passions, and their base inclinations? How should satirical authors, moralists, and preachers have had so little success against absurdities and crimes? Why have not the great and the rich, purchased the art of giving a great capacity to their children? Believe, then, that such an act is not entirely in the power of men. It is nature herself, that, by means of the immutable laws of organization, has reserved to herself not the only, but the first right, over every exercise of the faculties of man and animals.

Continuation of the exposition and of the refutation of different Opinions, on the origin of our Moral Qualities and Intellectual Faculties.

Influence of Climate and Food on the Moral and Intellectual Forces of Man.

Some naturalists would derive certain qualities from the influence of climate, from food, drink, and even from the milk furnished to the infant.

This is to confess, that our qualities and faculties are inherent in our organization ; for, the milk of the nurse, food, drink, climate act only on man's physical system. It is incontestable, that all these circumstances act with marked influence on our physical and moral nature; but again, do we not confound the power of *modifying* with the power of *producing?* The varieties of food and drink excite or weaken the action of the organs, but can neither produce them, nor cause their disappearance. The nurse's milk, like any other aliment, may be the cause of a physical constitution more or less healthy, and thus influence the character and the mind; but it can neither give nor take away determinate inclinations or qualities. If parents have a right to impute to nurses the malpractices of their children, why do not we, who feed on beef, pork, mutton, &c., render these animals responsible for our good and bad qualities?

It is equally notorious, that climate does not influence the whole constitution and the form of certain parts of the body only; but likewise the different development of different parts of the brain, and, consequently, the different configuration of the head, and, lastly, the modifications of the moral and intellectual character of different nations. But, however different, and however powerful local circumstances may be, they never have changed, and never will change the essence of an animal or of any variety of the human species.

Influence of Wants on the Instincts, Propensities, and Faculties of Animals, and of Man.

Some, again, would have the necessities of man and of animals regarded as the principal source of their instincts, propensities and faculties.

These necessities may be regarded under two aspects. If they come from without, such as cold, heat, &c., all that we have said respecting external things, which rouse our internal faculties, is applicable to these. The accidents which incommode animal or man, lead them, it is true, to exercise their faculties, in order to rid themselves of the evil; but, it does not follow that these necessities give rise to the internal faculties: if it were so, the same external causes would produce, in all animals and in all men, the same qualities; whereas, each animal and each man reacts in virtue of his organization on things without, and in the manner peculiar to himself. The idiot tries no means to secure himself from the action of the air; the sane man covers himself with clothing. The partridge dies with hunger and cold in rigorous winters, and the swallow falls benumbed from the summit of buildings, while the nightingale and the quail depart for more temperate climates, without waiting for cold and hunger. The cuckoo has no less need to lay eggs, than the linnet; yet he builds no nest. Are the hare and the squirrel both hunted? The one runs to hide himself in his burrow, the other saves himself on the top of trees. Thus all that can be attributed to external circumstances is, that they put the various internal faculties in operation.

If we call necessities, the internal movements, or sensations which lead both animal and man to seek something out of themselves for their satisfaction; if, for example, we give the name of necessities to voluptuous desires, ambition, &c., it is evident, that these movements of the soul are only the result of the action of the interior organization; since man and animal can have no such desires, so long as the organs adapted to them, are not in a state to act. This previous development and susceptibility of action are indispensable conditions, in order that the interior propensities may make themselves felt, and that the animal and the man may be excited to seek the objects, which find themselves in relation with their active organs. In the new-born infant, the need of the breast acts powerfully; not because the breast itself produces the want, but because, for the preservation of the child, a reciprocal relation has been established between him and the breast. By a contrary reason, the sexual organs of this child and their corresponding organ in the brain not being developed, there is not in him the slightest trace of the want relative to the other sex. But in proportion as these organs increase and become active, a new faculty, a new propensity is awakened in the interior man; and it is the sense of this propensity which we call want. Does the object which is in relation with this propensity offer itself to the eyes of the young man or the young girl? their blood is roused; while, on the contrary, the same objects being no longer in relation with the now worn-out organization of the old man, fail to excite him. Do the limbs develop themselves in the young animal or in the man? the necessity of walking, jumping, running, and of exercising themselves in all sorts of tricks and sports, is likewise felt. It is not because the bird has need of a nest, the beaver of a house, that they acquire the talent of building; but they have this talent because they are destined to build; nature has, in a manner, impregnated their organization with this talent; and when this organization becomes active, they are internally prompted to build. Hence it is, that the weaver-bird forms her tissue even when encaged; and hence the beaver builds, however well lodged he may be already. Nothing shows better that in this they follow the impulse of an internal faculty, without being determined by any external necessity. There are, likewise, men for whom travelling, music, &c., are almost matters of necessity, because in these individuals, the organs which correspond to these propensities possess a predominant activity. It is, again, by the same principle, that we must explain, why men who have several organs eminently developed, experience a greater number of wants than those whose organs are less energetic. The idiot has few desires, consequently few wants, and he has few desires, because few of his organs arrive at complete development, or any considerable degree of activity. As we advance in age, our internal wants diminish, because the activity of the organs is impaired.

If, then, the internal wants are the result of the action of the cerebral organs, and if external things cannot become the object of our wants, except by means of these same organs, the assertion of M. de Lamark* falls of itself. This author thinks, that the internal organs, as well as the external, are produced by necessity and by exercise. But a necessity can no more exist without a faculty, than the exercise of the faculty can exist without an organ. For the rest, as I do not believe that this strange opinion will find many partisans, I am going to present the leading idea of it, and to reply to it in a few words: Naturalists, says M. de Lamark,† having remarked that the forms of the parts of animals, compared with the uses of these parts, are always in perfect relation, have thought that the forms and the state of the parts may have led to their use. Now this is an error; for, it is easy to show by observation, that it is, on the contrary, the necessities and the uses of the parts which have developed these parts, which have given birth to them where they did not exist, and which, consequently, have given place to the state where we observe them in each animal.

Thus, M. de Lamark supposes, that the sense of necessity exists before the internal organs, and that the exercise of the external organs precedes the existence of these organs: "The mole," says he, "preserves her little eyes, only because she exercises them but little; serpents having adopted the habit of crawling on the ground, and of hiding themselves under the grass, their body, by a succession of still repeated efforts to elongate themselves in order to pass into narrow passages, acquire a considerable length, out of all proportion to their size."* Men, moved by the necessity of bearing rule, and of directing their vision both far and wide, have found themselves obliged to stand upright; and this custom having been adopted, from generation to generation, their feet have acquired a conformation fitted to maintain them in a perpendicular position.†

---

* Philosophie Zoolog. Paris, 1809, T. i. ch. 7.
† L. c. T. i. p. 235.

But what will M. de Lamark amswer to the following questions? Why does not the mole make use of its eyes, and why has the serpent the foolish notion of crawling on the ground, and passing through narrow holes, as the wire passes under the drawing iron? Whence comes in man the propensity to look far and wide? And, in the beginning, when there existed neither interior nor exterior organ, what prevented the mole and the serpent from adopting different habits of life, and thus acquiring the eyes of the eagle, and the legs of the giraffe? How can we believe that supreme wisdom has not placed each animal in harmony with his external world, and consequently the internal faculties in accordance with the external organs? Without this harmony, animals would be found in a violent state of perpetual contradiction, or would have perished after a few moments of existence. The tiger would have been destined to feed on flesh; but have received neither the inclination nor the faculty to destroy other animals. The bird would have been intended to migrate from one climate to another; but nothing in his internal organization would have warned him of it, and, perhaps, wings would have been wanting with which to fly. The bull would have been destined to pasture; but he would neither possess scent to choose salutary plants, nor the teeth proper for their due mastication.

---

* L. c. p. 245.

† L. c. p. 250.

And, into what difficulties should we not fall in fixing the limits, where the production and augmentation of external organs should finally be arrested. Man, to whom his two hands are often insufficient, would he always content himself to have only two? Would not eyes make their appearance on his back? How much would the legs of the heron and the stork, and the neck of the swan be still more lengthened? On the contrary, from the time of Aristotle, these parts have been as long as they now are: how is this to be explained? Is it, as M. de Lamark says, because birds have always remained in the same circumstances? But, in stating this, he recognizes the principle, that nature originally prescribed to them to keep themselves in these circumstances. What cause could have prevented the marsh birds from gradually going deeper in the water, and from lengthening their feet and necks more and more by the continuance of their efforts? Why should cats, rats, and sheep, who use their tails so little, not have lost them wholly ere this? To what extent might not the power be increased possessed by animals, of augmenting the number of their limbs, or of being transformed from one species to another, by accidental causes, be increased? The opinion of M. de Lamark might at least be adopted by some sects of philosophers, one class of whom suppose, that the soul herself directs the formation of the body, which serves her for an investment; while another maintains, that the species either ameliorate or degenerate without cessation, in such a manner that man might descend to the rank of the monkey, or the monkey raise himself to that of man.

The reader will now be convinced, that there cannot exist any necessity or natural occasion, without there existing an active organ, an impulse from within. Without certain vital forces in the interior, there could be neither hunger nor thirst, nor necessity for respiration, nor necessity of the union of the sexes. Thus the exterior necessities always suppose an interior force.

From this we may form an opinion of the vague and obscure language of some naturalists: "The sensibility, more or less cultivated by the necessities and by circumstances, produces the different degrees of intelligence, whether in the species or in individuals. What we regard in them as the natural sagacity of instinct, frequently is only a development of that love of self which is a necessary consequence of sensibility: it is not to instinct, it is to the faculty of perception and its effects, that the means belong, which animals employ to satisfy the wants of their natural appetite. It appears certain, that, if cold and other external agents did not cause the rabbit to suffer, more than the hare is affected by them, this animal, which now digs its burrow, would hardly be induced to take the trouble."

The same George Leroy, otherwise an excellent observer, wished to derive the cunning and in general the inventions and ingenious actions of animals, from a strong sense of want.

The rabbits which we keep in our stables, are certainly not incommoded by the cold; yet we cannot prevent them from digging their burrows. And why does not the hare, when pursued by the hounds, feel the urgent necessity of seeking an asylum under ground? How happens it that such different external circumstances produce absolutely the same instincts, the same inventions, the same ingenious actions in all individuals of the same species; while the same circumstances engender opposite instincts, and very different inventions and ingenious actions in other species? Why attribute to external circumstances the qualities of animals, when it is confessed, that the man of the greatest genius could add nothing to their sagacity, when it is aroused and exercised by difficulties?

Who does not see, that in all discussions on the natural wants, men have constantly confirmed the false notion that external objects create the instincts, propensities, faculties, with this other true notion, that external circumstances can arouse the faculties inherent in the animal, call them forth, and give them activity?

Can Attention give rise to any Instinct, Faculty, or Propensity whatsoever?

It has long been one of the favorite notions of many philosophers, that attention is the source of all the faculties of man; that one may acquire such or such a faculty, according as he directs his attention to such or such an object, according as he cultivates the faculty in question. Helvetius* has gone so far as to say, that there is no well-organized man, who cannot exercise his attention with all the force and the constancy, which would need to be employed in order to elevate him to the rank of the greatest men. Such is the eager zeal for deriving from a single principle all the phenomena of animal life! Condillac made sensation the source of all the faculties. According to him, recollection, memory, comparison, judgment, reflection, imagination, and reasoning, are included in the faculty of perceiving. M. Laromiguiére, seeing that sensations are almost the same in all men, while their moral and intellectual faculties are infinitely different, and that the sensations are only passive, believed himself obliged to admit *attention* to be the generating principle of all the faculties. The attention of Laromiguiére is the reflection of Locke. Meanwhile no one disputes that sensation, reflection and attention are innate faculties. But, do these faculties give rise to a specific propensity or talent?

---

* De la Espirit Dumas, Physiologie, T. iv. p. 12.

Let us see how attention is exercised in animals and in man; and the reader will judge whether the faculties, instincts, and propensities, are an effect of attention, or whether attention is the effect of an innate instinct, propensity, or talent.

Both men and animals are endowed with different instincts, propensities, and talents. With each instinct, propensity, and talent, nature has established determinate relations in the external world. There is, for example, a determinate relation between the silk-worm and the leaf of the mulberry-tree; between the ferret and the rabbit; between the duck and the water; between the hen and her chickens; between man and woman, &c. It is thus, that every living being has certain points of contact with determinate external objects. The more energetic the instinct, the propensity, or the talent, the more numerous are these points of contact; the more intimate are they, and the greater, consequently, the affinity of each quality to its determinate object.

When an animal or a man is excited by the relation which exists between him and his relative object, the man or the animal is found in a state of *attention*. The hungry fox scents the hare; the falcon, gliding through the air, perceives the lark; they are then *attentive;* the philosopher is struck with a happy idea; he is then *attentive*. Now, you will explain why each animal has the habit of fixing his attention on a different determinate object, and why each different man fixes his on different objects. The roe-buck and the pigeon regard with indifference, *without attention*, the serpent and the frog, objects of the attention of the hog and the stork. The child fixes his attention on playthings; the woman, on her children and on dress; men, according to their individual dispositions, on women, horses, battles, the phenomena of nature, &c. Hence, the difference which travellers make, in their descriptions of the same country and the same nation; hence, the diversity of the judgments which different men pass on the same objects; and, as La Bruyére says, if each reader expunged, or changed according to his fancy, every thing in a book repugnant to his taste, or, which he judged unworthy his attention, there would not be a word of the author's left in it.

Every instinct, propensity, and talent, has, therefore, its attention. Attention is, therefore, an effect, an attribute of a pre-existing innate faculty, and any thing rather than the cause of this faculty.

If instincts, propensities, and talents are feeble, their relations to their objects are equally so, and neither man nor animal will have a long or a strong attention. It is for this reason that, in infancy, when certain organs are still undeveloped, and, in old age, when the organs have lost their energy, we regard with coldness the same objects, which, at the age of manhood, excite our liveliest interest.

There is no attention, not even the possibility of attention, where there is no interest, no propensity, no talent, in relation with external objects. Who will inspire the horse with attention for the monuments, which we erect to glory and to immortality? or, the ram, for our arts and sciences? To what purpose to attribute, with Vicq d' Azyr, the want of attention of monkeys, to their turbulence? Show one a female, or a good fruit, and you will find him attentive. To wish to make him attentive to your lectures on neatness or decency, is to forget that his organization is imperfect in comparison with that of man, and that there exists no point of contact between these qualities, and the innate qualities of the monkey. The same thing takes place in idiots.

No one, I suppose, will be tempted to derive from attention, the ingenious aptitudes, instincts, and propensities of animals. Who would maintain, that the beaver, the squirrel, the loriot, and the caterpillar, build, only in consequence of an attention, which they must have directed to these objects, when they were still unknown to them? Even among men, genius ordinarily commences its great works, as it were by instinct, without being aware of its own talent.

In other respects, I leave attention and exercise, as well as education, possessed of all their rights. It is not enough for one to be endowed with active faculties; exercise and application are indispensable to acquire facility and skill. To awaken the attention of men of coarse minds, we must either make a strong impression on their senses,* or we must limit ourselves to the ideas and objects with which they are familiar; that is to say, with which they have already points of contact.

These considerations willl suffice to reduce to its just value the merit of the abstraction so much cherished by philosophers,—*attention.*

Can Pleasure and Pain produce any Moral Quality, or Intellectual Faculty?

Some rest on the doctrine of Aristippus, who explains, in an arbitrary and very inexact manner, the principle of his master, Socrates, with regard to the happiness of man ; to regard desire and aversion, pleasure and pain, as the sources, not only of our actions, but likewise of all our qualities and all our faculties.

Animals, children, and half-idiots, are as sensible to desire and aversion, to pleasure and pain, as adult and reasonable men ; they ought, then, according to the opinion of Aristippus, to possess as many qualities, the one as the other. It is with desire and aversion as with attention. For what object does a man or an animal feel desire? Is it not for the object, which is most in harmony with his propensities and his talents? The setter has a desire for the chase; the beaver for building, &c. Such a man tastes the most lively pleasure in generously pardoning offences; another rejoices when he succeeds in satisfying his vengeance; this man places his happiness in the possession of riches; the pride of this man is a philosophy, which elevates him above human vanities. Desire and aversion, pleasure and pain, have, therefore, their origin in the activity of the different innate propensities and faculties.

---

* Propensities.

Are the Passions and the Desire of Glory, the Source of our Qualities and Faculties?

Helvetius maintains, that the sources of all the qualities of the soul and mind, are the desire of distinction, and the passions; and that, consequently, the moral and intellectual forces are not innate.

Helvetius and his partisans ought first to demonstrate, that ambition and the passions, are strangers to the nature of man. If they are innate, then they must become, like any other internal impulse, excitants of the other qualities. The innate desire of distinction, an ardent passion for a woman, will certainly animate the courage of the young warrior; but I should vainly wish to shine in the first rank of poets, or of musicians; all my efforts would be useless. Cicero never succeeded in making verses; and Voltaire remained only tolerable in mathematics.

The desire of glory, again modifies itself according to the predominant talents. The actor wishes to distinguish himself in the histrionic art; the warrior, in battle; the musician, in music; the architect, in monuments; the physician, in the art of healing. Whenever this desire amounts to ambition, to the love of glory, it is, at once, a proof that the actor, the warrior, the musician, &c., feel themselves penetrated with an energetic faculty, which sustains their activity in spite of all obstacles; and which never fails, not only to give, but likewise to consolidate a brilliant reputation.

The reasoning of Helvetius is a *petitio principii*. He would derive the faculties from the passions; whereas the passions are the strongest expression of our faculties. Each instinct, propensity, each excessively active talent, is a passion. Hence, the passion of love, the passion for travelling, the passion for music, building, war, &c. Consequently, the passions suppose the existence of the qualities or the faculties of which they are the extraordinary manifestation.

When Helvetius, to prove his assertion, advances that he has never found an idiot girl, whom love did not render intelligent, we must conclude, that when he was in love, he found all the girls whom he met with intelligent.

Does Social Life give rise to Factitious Qualities or Faculties?

Numberless works contain *reveries* on the natural state of man, and on the number of good and bad qualities which, as some say, he has acquired, only in social life. In this hypothesis we easily start with the supposition, that man was made for solitude; that he has been led, contrary to his nature, to unite himself with other individuals, to form a family, a tribe, or nation. These new relations, for which he was not designed, have caused to spring up in him, all those vices and virtues, of which, in his natural state of insulation, he would forever have been ignorant.

Let us examine, for some moments, the instinct of *sociability* in man and in animals.

Some animals lead a solitary life, the male even separated from the female; in other species, the male and female remain united. In some species, the parents separate from their young, as soon as these are in a state to provide for their subsistence. In others, the parents and all the race of the year, form a little society till the return of spring, when the young ones seek to form for themselves an independent establishment; and, finally, several species form flocks and live in common. In some, a single male couples with several females; in others, each male joins for life with his particular mate.

All these modes of living have always been invariable, and are, by no means, the result of an arbitrary choice; an evident proof that insulated existence, like social existence, are natural institutions for the different species of animals.

Do not believe, what some naturalists imagine, that it is weakness and the need of mutual succor which brings together certain species in society. While so many powerless insects bring forth and live by themselves, why do the gnats, the ants, the bees, the hornets, live together by thousands? The fox is more feeble than the wolf; but we never see him, like the wolf, associated with several of his comrades: the wren, the mock-bird, the linnet, the nightingale, insulated in our groves, charm our ears by their melodious accents; while the bold sparrow and the babbling rook, assembled by hundreds, deafen us from morning till evening. What advantage do the linnets, the sheep, derive from their union, when a single hawk, a single dog can disperse them? Have the headlong boar and the powerful bull more need to lend each other succor, than the timid hare, and the feeble insulated quail?

If it be social life which produces certain faculties, how do you conceive that each of the different species of animals which live in society, enjoys faculties so different, so opposite? How should the mere plurality of individuals produce so many peculiarities, diversities of instincts, propensities and faculties?

Let us penetrate still farther into the mysteries of nature? Each species of animals is destined to fill a void, to accomplish an end in the order of things. As soon as a species was ordained to live in society, it became necessary that all the individuals should be furnished with the qualities necessary to attain this end of the great family. Each individual must be fitted for the whole society. The qualities of each bee, and chamois, and beaver, had to coincide. According as this general end is different, the faculties of the individuals of whom a certain number is destined to form a society, are equally different. The establishment of sentinels among the bustards; the direction of the herd by the leading chamois; the common labors divided between several individuals among the bees and the ants; the mutual aid which swine and monkeys give each other; the direction of a flock of wild geese, always formed in a triangle in their flight; all these instincts have been given to these animals, at the same time as the social instinct.

It is absolutely the same with the human race. Man has been destined to live in common. No where, and at no period, has man lived alone. As far as we can go back into history, man has been united in families, tribes, and nations, and, consequently, his qualities must have been calculated for society. The phenomena which we witness in whole races, are no more the effect of this union, than those which take place in each man in particular. Always, and every where, the human race has manifested the same propensities and the same talents; always and every where, there have resulted the same virtues and the same vices, the same employments and the same institutions. There exists no crime against which we cannot find a law in the bible; calumny, theft, usury, incest, adultery, rape, murder, had already spread over the earth like a torrent. On the other hand, there exists no virtue, no moral precept, which has not been recommended, no faculty relative to human occupations, which has not been more or less exercised. Cain was a laborer; Abel, a shepherd; the children of Jubal played on all sorts of wind and stringed instruments; the children of Tubal Cain were skilful workmen in iron and copper; Nehemiah established regulations of police, &c.

The only changes we remark in the progress of human society, consist in this, that the same propensities, and the same faculties, are exercised on different objects, and produce modified results. The manners, customs, laws, different religious ceremonies of different nations, all rest upon the same basis. Every where, men profess to do and believe what they regard as just and true; every where, they profess to honor a Supreme Being; every where, there are objects of vanity and glory, marks of honor and disgrace; every where there are masters and servants; all nations make war; men and women are united in all climates, however different their creeds and the ceremonies of their union; every where, there are mournings for deceased husbands and wives, children and friends; and every where is their memory honored, whether they embalm their bodies, place their ashes in urns, or place over them mounds or monuments. Sing your lines on the straw, or on the harp; dress your chiefs with feathers or with purple; your women, with flowers or with diamonds; inhabit huts or palaces; it will be still the same faculties, which lead men to act within the circle traced for him by his Creator.

But some think to prove that man is born without propensities and without faculties, and that he acquires these faculties merely by social life and by education; by citing the example of some individuals found astray in the woods, who, having received no education, have all the brutality of animals, and appear to be not only deprived of human faculties, but even of those of the least intelligent animals.

The objection falls, when we learn that these savages found in the forests, are ordinarily miserable creatures, of imperfect organization, as M. Roussel* and de Tracy† have already remarked. The following is the organization of these pretended savages: Their heads are found to be either too large and affected with hydrocephalus, or too small, compressed and deformed; almost always with a scrofulous constitution; the eyes small, sunken, slightly opened upwards, closen horizontally; the mouth very large, the lips pendant, the tongue thick, the neck swollen, the pace staggering and insecure. Their primitive organization is, therefore, defective;

---

* M. Roussel, Syst. Phys. at moral de la femme.
† Idéologie, p. 246.

they are real idiots, who can receive no instruction, and no education, and it is this fact which accounts for their being found in woods. As they are a charge to their families, and, as in certain countries, the people of the lower classes regard these unhappy beings as bewitched or as changelings, it often happens, that they expose them, or allow them to wander at their will without interference. It has even been remarked, in hospitals, that these deformed beings have a decided propensity for living in forests, and that they always try to escape. They told us at the hospital at Haina, near Marbourg, that some of the idiots whom they kept there, made their escape, and that, in pursuing them, they sometimes found others who had escaped before, and who had nothing more than fragments of clothing. We saw near Augsbourg, an insane woman, who had been found in a wood. At Brunswick we were shown a woman completely idiotic; she had been discovered in a wood, lying on her side, with her eyes open, but unable to articulate.

The savage of Aveyron, placed in the deaf and dumb institution at Paris, is not different from those of whom I have just spoken. He is weak-minded to a great degree; his forehead is very little enlarged laterally, and very much compressed from above downward; his eyes are small and greatly sunken, his cerebellum little developed. We were not able to convince ourselves that he had the sense of hearing; for, they could not in our presence render him attentive, either by calling him nor by sounding a glass behind his ears. His mode of existence is tranquil; his attitude and manner of sitting are decent; it is only remarked, that he is constantly balancing the upper part of his body and his head; he salutes by inclining his body, to the persons who arrive, and manifests his satisfaction when they depart. The sexual propensity does not seem to be active in him. He knows a few letters, and even points to the objects which the letters designate. In other respects, his favorite occupation is to restore to their former place any articles which have been displaced. Such is the result of the hopes which were formed of him, the efforts which have been made, and the patience and mildness which a benevolent woman has shown towards him. We may pronounce, with confidence, that these labors will never be crowned with any better success.

The wild man found in the forests of Lithuania, who is cited by many authors as an example of the powerful influence of education, was certainly a similar being.

When M. de Tracy,* in speaking of man in general, remarks that the individual who has received education has less resemblance to him who has received none, than an egg to a chicken, or an acorn to an oak, he speaks truth only in relation to these unfortunate beings; but the experience of all times has proved, that they remain simple, whether they live in forests, or continue in the bosom of their family. The most immoderate panegyrist of the effects of education, Helvetius, is obliged to acknowledge, that a favorable organization is the primary requisite of education.

It is difficult to believe, that, in our populous regions a well-organized man can wander for a long time as a savage. Should such an individual be found, who has gone astray from childhood, it is impossible that in his state of insulation he should have acquired any knowledge dependent on instruction. But even in this situation, he certainly must have exercised the faculties which belong to him as a man. As soon as such an individual finds himself in the midst of society, he will be seen to develop human dispositions, not only by a prompt imitation of social usages, but by his capacity for instruction. It will not be possible to imagine, as was done in the case of the individuals referred to, that he has adopted the mode of living and the character of wild beasts. Example and instruction will soon change his mode of life; or, if there is no change, the subject is an idiot; and education and circumstances can only act upon a man so far as he possesses the necessary dispositions, and is prepared for them by his organization.

---

* Idéologie, p. 244.

Locke, to demonstrate that the qualities of the mind and soul have an accidental origin in social life, adduces the case of children, who, according to him, still want certain propensities and talents, and are destitute of passions.

If Locke had been for a single day a mother or a nurse of children, he would have seen, in a very little time after their birth, the most evident marks of their passions, or rather of their affections. "It is useful," says Cabanis, "to remark all those passions which succeed each other in so rapid a manner, and are depicted with so much simplicity on the changing face of children. While the feeble muscles of their arms and legs can hardly execute some uncertain movements, the muscles of the face already express, by distinct motions, although composed of very complicated elements, almost the whole succession of general affections proper to human nature; and the attentive observer easily recognizes in this picture the characteristic traits of the future man. Where shall we seek the causes of these expressions, which are composed of so many diverse elements? Where find the principle of these passions, which could not have formed themselves at once? Certainly not in the impressions of external objects, still so new, so confused, so discordant."

Children possess, to a wonderful degree, the art of manifesting externally what passes within them; their movements and their cries are very different, when they are irritated by unjust treatment, and when the same accident happens without any intention of offending them; they cry very differently to express pain, and to manifest weariness, anger, the desire to be changed, or to have the breast, &c.

And, if it be maintained, that at the age of some years, children have no passions, affections, or decided propensities, this is confounding the objects, on which the propensities act at different ages, with these propensities themselves. Children are not ambitious for places of honor; they have no idea of robbing their fellow-pupils of their property by fraud; they are not goaded by the desire of achieving conquests; but they cheat each other for birds' nests; fight for playthings; are proud of occupying the first places at school; and the vexation at losing a kite which has got free, afflicts a boy more severely, than the loss of a fine horse would do at a later age. Who does not observe daily, in children, envy, jealousy, the most furious anger, compassion, the love of gaming, avidity, ambition, and even pride, cruelty, extreme sensibility, &c.? We shall say, then, with much more truth, that children are, in almost every thing, the diminutive of adults. Let us concede to Locke that children do not yet manifest all the qualities and all the faculties proper to the adult, what consequence can be drawn thence against their innateness? Must we not regard as innate, the instincts of animals, the greater part of whom do not act immediately after their birth, nor even at all seasons of the year? They do not always build their nest or their covert; they are not always laying up provisions; they do not emigrate, or sing, or couple at all times. Locke was compelled to acknowledge, that he could not resist the proofs and the objections drawn from the animal kingdom; but he pretends to answer them by saying, "that he did not write a philosophy of animals," and thus has fallen into an error amply refuted, that man and animals have nothing in common between them, and are governed in all respects by opposite laws. But, not to go beyond men, will Locke and his partisans deny, that the propensity of love, for example, is allied to the organization? Yet we find no trace of it during their earliest years. If Locke had had more just ideas of the primitive faculties, he would have attributed to each of them a proper organ; he would have known that the various nervous systems, and particularly the different organs of the brain exercise their functions independently of each other; that their development and their activity are not complete in the same time; but that they develop themselves successively, some sooner, some later; that each organ, even when perfectly developed, may be sometimes active, sometimes inactive. Had Locke known all this, he would not have deluded himself with false observations; and the principles which he has established, to explain the origin of the qualities and faculties of man, would not have been in contradiction with the nature of man and with that of animals.

For the rest, many of these proofs have already struck and convinced some, both of the ancient and modern philosophers; and they have, with me, acknowledged that there are no primitive qualities either acquired or factitious; but that, in man as well as in animals, all the dispositions are innate, and that their manifestation is rendered possible only by the organization.

Plato* acknowledged that the talent of organization is innate. According to him, it is not enough, in order to be a philosopher, to join to the desire of knowledge a vast conception, good memory and penetration; it needs, also, a peculiar disposition, which cannot be acquired any more than these auxiliary faculties. He says, also, that the aptitude for mathematics is innate. He regards the desires and the sentiments of pride, courage, and sensual appetite not only as innate, but as founded on organization.†

Hippocrates, in speaking of the conditions necessary to make a good physician, says, that above all he needs the natural dispositions.

Quintillian ridicules the ancient maxim, "that any body, by means of constant application may become an orator." "If precepts," says he, "could bestow the art of eloquence, every one would be eloquent."

---

* De Repub. vi.

† Let. Num. ii.

Locke himself admits innate faculties. Condillac,[*] though not consistent throughout his works, thus expresses himself on innate faculties: "Men are ignorant of what they can do, so long as experience has not led them to take notice of what they actually do from nature only. Hence, they have never done by design, any thing but what they had already done, even without intending it. I think that this observation will always hold good; and I also think, that if it had not escaped notice, men would have reasoned better than they have done. Men never thought of making analyses, till they found they had made them; they never thought of speaking the language of action to make themselves understood, till they found that they were understood. In like manner they would never have thought of speaking with articulate sounds, unless they had observed that they had spoken with such sounds; and languages have commenced without any design of making them. It is thus that men have been poets and orators without dreaming of being such. In a word, all that they have become, they have first been by nature alone; and they have not studied to be such, till they had noticed what nature herself had led them to do. She has commenced every thing, and always well: this is a remark which we cannot repeat too often.

"If laws,"[†] says he, elsewhere, "are not conventional, they are then arbitrary! There may have been arbitrary ones; there are even too many, but those which determine whether our actions are good or evil, are not such and cannot be such. They are, indeed, our work, because they are conventions which we have made. But we have not made them alone; nature made them with us, she dictated them to us, and it was not in our power to make others. The wants and faculties of man being given, the laws themselves are given; and though we make them, the Deity who has created us with such wants and such faculties is, in truth, our sole legislator. In following these laws thus conformed to our nature, it is him whom we obey, and this is what constitutes the morality of actions."

---

[*] Œuvres complètes, tom. iii. 8vo. p. 115.

[†] L. c. p. 115.

St. Paul* spoke in the same sense, in addressing the Romans. "If," says he, "the Gentiles, who have not the law, do by nature the things contained in the law, they show the work of the law written in their hearts."

Hume regards covetousness, the sense of justice and injustice, the moral sense, &c. as innate.

George Leroy speaks of compassion and religion, as innate sentiments.

Herder† regards the sociability of man as innate, and thinks with me, that the law, "do not to another what you would not have another do to you," is founded on the sympathy natural to man. He even regards, as innate, the disposition of man to religion, and his propensity to honor superhuman beings and those of a superior order.

I shall, elsewhere, completely prove these same truths. I shall, likewise, while treating of the different organs and the various primitive faculties, demonstrate that the talents for music, painting, architecture, the mechanics, imitation, geometry, mathematics, &c., which seem to be only talents acquired and produced by social life, are innate in man, and are indicated to him by his organization, as the laws of the hexagonal cell are to the bee; to the nightingale, his melody; and to the beaver, his building. I shall, also, make evident, that if the qualities of man were not determinate, society would only be confusion. I shall show that the determination of justice and of injustice supposes the internal sense; that if the positive laws of thought were not innate, there could exist neither logic nor philosophy; in fine, that all the propensities and all the primitive faculties depend on a determinate and peculiar organization.

---

* II. v. 14, 15.

† L. c. Th. I. s. 252.

SECTION III.

ON THE CONDITIONS REQUIRED FOR THE MANIFESTATION OF MORAL QUALITIES AND INTELLECTUAL FACULTIES.

In the section preceding, I have stated our opinion on the origin of the instincts, the propensities, the talents; in fine, on the origin of our moral qualities and intellectual faculties. There now presents a second question, which is likewise of the highest importance to the physiology of the brain, to wit: whether these qualities and these faculties can, in this life, manifest themselves independently of material conditions; or, whether they require for their exercise certain organs, with which they are in immediate relation.

If our moral and intellectual forces can manifest themselves independently of corporeal conditions, we might in vain seek in the organization, the apparatuses of the moral qualities and the intellectual faculties. It would always be impossible to found a doctrine on the functions of the brain and its parts, or a physiology of the brain. Man, considered as a moral and intellectual being, would be placed beyond the sphere of the observer. If, on the contrary, I can show that there exists an essential relation between his moral and intellectual forces and his organization, it will follow, that the researches to discover these material conditions, are the most important study for the true physiologist. If, again, I can show, as I shall do in the second volume, that these material conditions are the brain and its parts, we shall then have a glimpse of the possibility of creating a doctrine of the functions of the brain, a doctrine which exhibits the organs, by means of which all our propensities, sentiments and faculties are manifested.

The Manifestation of Moral Qualities and Intellectual Faculties depends on material conditions.

When I say that the exercise of our moral and intellectual faculties depends on material conditions, I do not mean that our faculties are the *product* of organization; this would be to confound conditions with efficient causes. I limit myself to what can be submitted to our observation. Thus, I consider our moral and intellectual faculties so far only as they become phenomena to us by means of the cerebral organs. The physiologist must never trust himself beyond the material world, and must neither affirm nor deny any thing but what can be proved by experience. He must not direct his researches to a spiritual substance alone, nor to this inanimate body alone; the living man, the result of a vegetative life and an animal life is his object. Consequently, he must not enter into these metaphysical questions: What is the nature and the essence of the faculties themselves? Are they the attributes of a spiritual substance, or the properties of organized matter? In a word, he must not seek to explain the union of the soul and the body, nor their reciprocal influence; nor how the influence takes place, whether by the immediate action of the Deity, by an ethereal fluid, or by a divine emanation. Whether souls are united to bodies sooner or later; whether they are endowed with different qualities in each individual, or are entirely similar in all; whatever may be the decision of theologians and metaphysicians on this subject, my principle, that the manifestation of the moral qualities and intellectual faculties can take place only by means of organization, rests immoveable.

The reader knows already, although I shall not prove it fully till the second volume, that the brain is the exclusive organ of our moral qualities and intellectual faculties. He will then be prepared to find that most of my arguments to establish my proposition, are relative to this grand and noble nervous system.

1. *The moral qualities and intellectual faculties manifest themselves, increase, and diminish, according as their organs are developed, increase in strength, and are impaired.*

What takes place in the functions of an inferior order and their organs, likewise takes place in the functions and the organs of a higher order. Now, I have shown in sections first, second, and fourth, of the first volume of my large work, that the different nervous systems develop and perfect themselves at different periods. It is thus, for example, that the nervous systems of the viscera of the abdomen and the chest are almost wholly formed, while the brain seems, as yet, only a pulpy mass. The olfactory nerve, and the nerve of taste, perfect themselves sooner than the auditory and the optic: we also see that the functions of taste and smell acquire their perfection sooner than those of hearing and sight. This phenomena especially takes place in those animals, which, when born, are deaf and blind. The same progress is remarked in the development of the brain. In newborn infants, we hardly discover any trace of fibres in the apparatuses which serve to strengthen and perfect this organ. These fibres show themselves distinctly in the posterior and middle lobes sooner than in the anterior. The fibrous structure of the cerebellum becomes visible only by degrees, and it is not till after several months, that the anterior and superior parts of the brain develop themselves with a decided energy. The brain is formed and increases gradually until it has attained its perfection, and this perfection takes place only between twenty and forty years of age. At this last period there seems to be no sensible change for some years; but in proportion as we advance in age, the system gradually lessens, the brain emaciates and diminishes in size, and its convolutions become less compact.

This successive and gradual order of development, stationary state, and failure, is the cause, and serves to explain, why, in the new-born infant, the only functions are those of the senses of voluntary motion, the expression of the want of nourishment, and of obscure sensations of pleasure and pain, desire and aversion; why all this takes place only to an imperfect degree; why the infant begins, by degrees, to attend to external objects, to act on them, to manifest determinate desires and propensities; how the impressions are preserved, and how these impressions become ideas and notions; how the qualities and the faculties, begin to act and to manifest themselves under the image of different talents as well as different propensities; for example, love, friendship, vanity, ambition, pride; how the infant becomes successively a child, a young man and an adult; how, at this period, all the moral and intellectual forces of the man have acquired their greatest energy, up to the moment when they begin to fail, and to lose insensibly more or less of their permanency and activity; in fine, how in old men there remain only blunted sensations, and weakness of mind. We see, clearly, by this succession of development, that the faculties of the mind and soul, and their manifestation follow, step by step, the state of their material conditions. The progression of the functions is the same as that of the organs. Nothing can show more evidently, that the manifestation of these faculties depends on the organization.

2. *When the development of the organs of the moral qualities and intellectual faculties does not follow its usual order, the manifestation of the functions of these organs likewise departs from its usual regular progress.*

We frequently observe in the rickets, that the intellectual faculties of children are more lively, than their age would warrant. The reason is, that one of the ordinary effects of this malady, is to give the brain an extraordinary degree of development and of irritability. Sometimes, indeed, a particular part of the brain is developed prematurely, without there being any disease to occasion it; and, in this case, the function proper to this part fails not to manifest itself at the same time. We have, for example, observed several children, in whom the part of the brain appropriated to physical love, had acquired an extraordinary development at the age of three or four years. These children were mastered by this unhappy propensity, although their sexual parts, even when they experienced some excitement, had rarely acquired an analogous development. Other children, in whom the same organization was remarked, manifested the phenomena of complete virility, while the other faculties were still undeveloped. I shall, elsewhere, cite several similar facts relative to the organs of each faculty. Does it happen that the different parts of the brain, or the totality of the organ, acquire their maturity and their solidity only at a very late period? The state of infancy and of half imbecility then prolongs itself to the age of from six to twelve years. But, at this period, nature seems to labor with new energy, for the development of the parts; and children from whom, until this moment, no capacity had been expected, become, in a short time, remarkable for their talents. This was the case with Gesner, one of the best and most amiable poets of Switzerland. Born of a family in which rickets were hereditary, his instructors, when he had attained the age of ten years, declared him entirely incapable of making any progress. One of the most distinguished physicians of Berlin could not, till his thirteenth year, combine his ideas nor make use of the organ of language.

The simultaneousness of the manifestation of particular functions, and of the irregular, precocious or late development of their organs, is, therefore, a constant phenomenon which cannot be called in question. Now it necessarily results from this phenomenon, that the exercise of the qualities of the mind and soul depend on material organs.

3. *If the development and the perfection of the cerebral organs has not been complete, the manifestations of the respective qualities and faculties remain equally incomplete.*

Although the energy of the functions of organs does not depend solely on their development, but also on their excitability, we may yet determine with confidence the degree of development of the brain necessary to its functions. The observations of all ages have established, that the brain is incapable of fulfilling its destiny, when its bony case or the cranium has only from thirteen to seventeen inches in circumference, the measure being taken on the most prominent part of the occiput, passing over the temples and the most elevated part of the forehead.

Willis has described the brain of a young man, simple from birth: its volume hardly equals the fifth part of that of an ordinary human brain. I have had a copy drawn after Willis in my large work. (Pl. XVIII. fig. 2.) M. Bonn, professor at Amsterdam, possesses two little skulls of idiots, and the brain of a simpleton who lived to the age of twenty-five years. (Pl. XX. fig. 1.) He was so stupid, that, though born at Amsterdam, they made him pass for an African savage, and exhibited him for money. M. Pinel has a similar cranium of a young girl of eleven years, perfectly idiotic. Among the anatomical preparations of the school of medicine at Paris, is also found the undeveloped cranium of an idiot child. I have had two similar skulls drawn, taken from my collection; both are remarkable for their smallness;* one is the skull of a child of seven years;

---

* Pl. XVIII. fig. 2.

the other* of a girl of twenty. These two individuals were perfectly imbecile. I have observed heads equally small, in several congenital idiots, still living. All these skulls and heads are from thirteen to fourteen inches in circumference, and eleven to twelve from the root of the nose to the great occipital foramen. If dwarfs, who enjoy their intellectual faculties to a certain degree, appear to form an occasional exception to this law, the size of the head has not been duly noticed, which, in these cases, is always very disproportionate to the rest of the body. Even when the head is a little larger than those which characterize complete imbecility, the intellectual faculties are still almost entirely benumbed.

In the different degrees, which characterize imbecility, the faculties manifest themselves in the same proportion as the brain becomes more perfect in its organization. Individuals, who are in this degree of development, exhibit some peculiar dispositions and propensities; their gestures become more significant; they go so far as to produce short phrases sufficiently well followed out. The functions thus elevate themselves together with the organization, until the feebleness of the mind betrays itself in a small number of points, or even in a single point.

We see, by this, that all individuals who are reputed simple, are not completely so. Parents and physicians sometimes have trouble in comprehending how a child, who acquits himself well in all there is to do in the house, and who exhibits exact sensations, sensibility, and even cunning, can be ranged in the class of simpletons. Such is, notwithstanding, the state of many children, who hear, but do not learn to speak. I have directed my attention to this point, while occupying myself with the functions of the sense of hearing;† and when I treat of the articulate language peculiar to man, I shall show that this accident has for its cause an organic malady of the brain, and a consequent want of power to exercise all its functions.

---

* Pl. XIX. fig. 1 and 2.

† Anat. et Phys. du Cer. T. 1. s. 6.

At Hamburg, we saw a young man of sixteen, in whom the anterior-inferior parts of the head were well developed; but his forehead was hardly an inch in height, because the anterior-superior parts had been checked in their development; and he enjoyed, in consequence, only the exercise of the functions belonging to the anterior-inferior portion. He learned names, dates, numbers, history, and repeated it all mechanically. But combination, the comparison of ideas and judgment, were entirely wanting. They regarded him with reason as simple, and could employ him in nothing. I shall have occasion in the course of this work, to cite several examples which confirm the proposition, that the defective development of the brain, or of particular organs, has always for its result the feebleness of their action.

4. *When the organs of the mind and soul have acquired a high degree of development and perfection, there results to these organs, a power of manifesting their functions with great energy.*

I shall prove the truth of this result, when I treat of the influence of the development of organs on the excise of the corresponding faculties. I shall show, at the same time, that when individuals distinguish themselves peculiarly, and in a remarkable manner, by a determinate quality, or when they fall into a fixed idea, propensity, partial mania, or monomania, by too great exaltàtion, it is almost always the extraordinary development of some particular organ which occasions it. Without now entering into these details, I shall content myself with fixing the attention of my readers on the manifest difference which every one may remark between three sorts of heads, to wit: the heads of idiots, the heads of men whose talents are only moderate, and those of illustrious men, of vast and eminent genius. The first are characterized by their smallness, as we have just seen, and the last by their great size. The heads of idiots, unless the brain be otherwise diseased, are characterized either by deformity, or their smallness; the heads of men of eminent qualities, by their magnitude.

This difference is conspicuously evident in the productions of the fine arts. We see that in their works which conforms to the indications of nature, artists make large heads to denote energetic intellectual qualities, and especially large foreheads; and they give small and depressed foreheads, and a head very strong in the posterior parts, to individuals who distinguish themselves only by qualities of an inferior order. The ancients gave to the statues of their priests and their philosophers much larger foreheads than to those of their gladiators. Remark, especially, the distinction they have adopted in their Jupiter of the capitol; the form of no head has ever been so strongly prominent in the anterior and superior part of the forehead. What a difference between this and the head of Bacchus!

In all the peculiar cases, in which men of talent and genius have not been of large stature, their heads are observed to be disproportionate to the body, and we no longer find the proportions usually adopted for beauty, and which are fixed by the form of Apollo. So long as artists wish only to represent fine forms, they may, without doubt, continue to take Apollo for a model; but if they wish to express a great character, or great talents, they must sacrifice the point of general proportions.

It is in this way that we must explain the errors which several artists have committed. Even in the golden age of Grecian art they represented Pericles covered with a helmet, to conceal the size of his head. The Athenian poets laughed at this head, because they found it disproportionate to the body of Pericles. I have seen the same fault committed by our modern artists: they left the head of Napoleon of its natural size; but, in order to establish a proportion conformable to their ideas, they placed it on a colossal body. In general, artists are still, almost every where, imbued with the prejudices of antiquity, or with prejudices which some of them have introduced, in relation to what they call beauty. Let them be directed to cut in marble the bust of a great man of the age, and let them meet with unusual prominences,—for example, the organ of poetry unusually prominent in the head of Voltaire, they will not fail to plane away, to soften down these inequalities, and even to claim great merit for having thus corrected the faults of nature. These great artists do not know, that one day the organization will explain to posterity the glory or the shame of these great men; and that it will be by the fidelity of the forms which they will transmit to our grand-children, that men will rectify the partiality and the falsehoods of historians.

Let me be pardoned a little digression on the head of the Venus de Medicis. Artists agree that this small head has been substituted for the true one, which is lost; and yet they all imitate it in defiance of the laws of organization. With so small a head, every woman would of necessity be a simpleton; and the artists, certainly, will not maintain, that imbecility and beauty can be in harmony.

Those who would satisfy themselves, that the favorable development of the organs is always in relation with the more energetic exercise of their functions, have only to examine the heads of men who have distinguished themselves by eminent talents. Let them observe the heads of Socrates, Bacon, Sully, Golbert, Galileo, Boerhave, Haller, Leibnitz, Voltaire, Pascal, Montaigne, &c.

I observe, however, that a man who really merits the title of *great*, but only in a single relation, will not always have a vast, extended, voluminous head, because he is not endowed with great and extended faculties. The greatest mechanician or architect, the greatest musician, the first painter, &c., may excel in his art, without the whole brain participating in the great development of one or some few of its parts.

5. *It is only by the difference in the organization of the two sexes, that we are enabled to explain, how certain faculties are more energetic in the man, and others in the woman.*

From the different gradations of fibres in the brain of the man and of the woman, Malebranche[*] attempted to account for the difference in their manner of thinking and feeling. The two sexes, both in man and animals have the same brain, and consequently the same organs. But commonly some of these organs are more perfect in one sex, and some in the other. The parts of the brain situated towards the anterior-superior part of the forehead, are smaller in most women; thus their foreheads are in general smaller and shorter. They have, on the contrary, the parts situated in the superior region of the occipital bone, much more strongly developed. Their cerebellum is commonly smaller than that of men. We may, consequently, assume as a principle, that, in the heads of women who conform to the ordinary structure, the diameter from the forehead to the occipital bone is greater, and all the other diameters smaller. Such are the physical differences. Now these differences explain perfectly, the superiority of the intellectual faculties in man, and the greater energy of the love of children in women, &c. The two sexes offer, without doubt, a great number of exceptions which are the cause that, frequently, the talents proper to women are met in man, and *vice versa.* But all that I should say here on this point, could not be well understood, until I shall treat more particularly of each organ of the functions which have relation to it. Then only will men be convinced, that if certain organs are smaller in one sex, their functions are also more feeble; and that if other organs are larger, their functions are executed with more energy. It will then be seen, that it is not education, but nature, which, by means of a varied organization, has assigned to each sex its particular sphere of moral and intellectual activity.

---

[*] Recherches de la vérité 5th edition. Paris, 1700, t. 1. p. 155.

6. *When the conformation of the brain of several individuals is similar, the propensities and the talents are similar, however different the form of the rest of the body; and when the conformation of the brain is different, the propensities and talents differ, whatever resemblance may exist in the rest of the body.*

Men of all nations possess all the same essential parts of the brain. Hence, there always has been, and always will be observed, in all nations, the same propensities, talents, moral qualities and intellectual faculties. The differences are only modifications, as the differences in the cerebral organization are likewise mere modifications. If certain parts of the brain are generally very much or very little developed in a nation, they will determine the national character, or the talents of which a nation is more particularly possessed or deprived.

It has always been remarked, that the brothers and the sisters who most resemble each other, or who, in the form of their heads, have most resemblance to one of their parents, also resemble each other as to the qualities of the mind and the soul. I know two twins, whom it is difficult to distinguish from each other, and who offer a striking resemblance in their propensities and in their talents. Two other twins, the brothers Fauchè, had many traits of resemblance; they were united from their infancy by an extraordinary attachment. I have compared with care the different parts of their heads. In comparing my remarks with their autobiography, which they severally brought me in writing, it was found that my observations were, in all respects, conformable to their own statements of their characters. Wherever the development of their cerebral organs was nearly equal, the respective functions of these organs were the same; in those points in which the different structure of their skulls announced a different development of organs, there existed a difference, not less sensible in their faculties. Of two other twins, of different sex, the boy resembles his mother, a woman of limited capacity; the daughter takes after her father, a man of uncommon talents. The son displays in all things the most humble mediocrity; the sister, on the contrary, raises herself, in many respects, above her sex.

But, if a case occurs of twins, whose organization is different, it is in vain that diet, education, examples and circumstances are similar, there results no resemblance in character. In two twin girls, the head and the physical constitution differ totally. In the one, nature seems to have thought only of developing the bones and the muscles; in the other, she appears to have occupied herself solely with the nervous system. Thus, the first is possessed of very moderate intelligence, while the second is endowed with brilliant qualities.

7. *When the physical constitution is transmitted from fathers to children, these participate in the same proportion, in their moral qualities and intellectual faculties.*

> Fortes creantur fortibus et bonis;
> Est in juvencis est in equis
> Patrum virtus.

From the time of Horace, men have never ceased to observe, that certain moral qualities are often propagated for ages in the same family; which proves the close connection between the organization and the exercise of the moral and intellectual forces. Hence it happens, not only that certain maladies, such as gout, phthisis, deafness, stone, &c., but also certain disorders considered purely moral, are hereditary. Ganbius speaks of a girl, whose father was possessed by a violent passion for eating human flesh, which induced him to commit several murders. This daughter, though separated from him a long time, and brought up in the midst of respectable persons, was a prey, like her father, to this inconceivable desire of devouring human flesh. Ganbius, in relating this anecdote, concludes with me, that certain moral qualitics are hereditary. I shall, hereafter, cite several instances in which a propensity to theft, to drunkenness, and even the unhappy propensity to suicide, were hereditary. Now, how could these dispositions, good and bad, be transmitted from family to family, were they not founded in organization?

8. *The state of waking, of sleep, and dreaming, also prove that the exercise of the moral and intellectual faculties is subordinate to organization.*

If a spiritual substance, independently of organization, exercised moral and intellectual functions, how could you conceive that this pure spirituality could be fatigued, exhausted; could have need of repose and of sleep? Sleep is nothing but inactivity, the perfect rest of the brain in a state of health. During this suspension of the cerebral functions, the brain receives new forces, and at waking, its functions are performed with facility. If some cerebral organs, irritated by any cause whatever, are put in action, while the action of the others is suspended, there result sensations and ideas which constitute dreams.

The nature of these dreams is almost always in harmony with the physical dispositions of the individual. The young man dreams of pleasure and agreeable events; he swims, he flies with voluptuous delight: valetudinarians, male and female, meet nothing in their dreams, but obstacles and crosses. We dream that we are dying with inflammation of the bowels, and awake with cruel griping. It is the same with somnambulism; and hence, the dependence on the organization is manifest.

9. *Every thing which sensibly changes, either weakens or irritates the organization, and especially the nervous system, and also produces considerable alterations in the exercise of the mental faculties.*

It has always been remarked that too rapid an increase, or a hastened development of organs weakens their special functions.* This especially happens in the climacteric years or periods of development, of which physicians and physiologists cannot too highly appreciate the importance. The mind, the body, all then suffer at once. The individual is incapable of steady application, and instruction is at once arrested. This state ceases, only, when the interval devoted to this development has been passed; and we readily perceive that this is the case, because the intellectual faculties at once resume all their energy.

On the other hand, are the intellectual organs developed too early, and kept in a state of excessive activity? There will often result an incurable exhaustion and paralysis of these organs; and it is thus that men of precocious genius sink into mediocrity, and even below it, if the exhaustion has been carried to its highest degree. I have already said, that the intellectual faculties, which are feeble in many children, especially in those which have collections of water in the cavities of the brain, often become strengthened and developed in a very striking manner, when the brain has acquired its complete growth and consistency.

---

* This is true in relation to growth in the natural world. A tree is materially injured by hastening its growth. It lives but a short period, and it fails to bear fruit oftener than every other year.

Again, it is a constant observation, that, in hydrocephalic patients, the intellectual faculties are weakened or regained, according as the effusion is increased, or as we succeed in lessening it.

In animals and in man, when already formed, the organs of the body are still subjected to different periods of an activity altogether different, according as these organs are developed or diminished by the influence of the seasons, temperature and food, and especially by the influence of the laws peculiar to the organization, or according as they are more or less irritated by the afflux of the fluids. Hence, we see the mechanical aptitudes and propensities of animals appear and disappear at different periods; for example, the propensity to procreate, to sing, to build, to migrate, to separate or collect in bodies, to gather fruits, &c. It is the same with the dispositions of the mind in the human race, and especially in women. These dispositions are subject to periodical changes of greater or less continuance. Malebranche* directs our attention to the fact, that, at different periods, the same object does not inspire us with the same feelings, and that we form very different judgments in regard to it. The object, meanwhile, has remained the same, but our organs have undergone some alteration. How much does our manner of feeling and thinking differ, at the moment when the senses are heated, and some instants afterwards, when one is more calm, and the senses are satisfied! What a powerful influence is exercised on our propensities and our faculties, on our will and our judgment, by the different affections, such as anger, hatred, jealousy, despondence, sadness, chagrin, terror, envy, disquietude, fear, compassion, desire, joy! Who can mistake the influence of the approach or presence of periodical evacuations, such as the menstrual, hemorrhoidal, &c., the influence of pregnancy, of retained evacuations, suppressed secretions, of food and digestion; of the immoderate evacuation of semen, milk, blood, &c.; in short, the influence of every thing which exhausts the strength, such as fasting, prolonged watching, too constant and uniform mental effort? Who can deny the influence of a considerable approaching change in temperature, especially at the approach of a violent wind, or a storm; that of castration, of disease of the testicles, the womb, and other viscera? the influence of inflammations and suppurations in general, of inflammations of the brain in particular, of abscesses, wounds, and concussions of this organ; that of narcotic and irritant poison; that of rabies, worms, &c.? Finally, who can avoid perceiving the influence which agreeable sensations have over us, and that charm which we find in surrounding objects, such as a clear sky, a fine climate, &c.; that of music, dancing, tranquillity of mind.

---

* Recherche de la vérité tom. i. p. 157.

All these, and many other causes produce the most astonishing changes in the exercise of our faculties, moral and intellectual, and yet they act directly over the organization only. Must we not conclude, that if, in certain cases, these same causes have for their result the most extraordinary propensities, such as the most shameless lasciviousness, a despair which refuses all consolation, the most arrogant pride, the most gloomy distrust, and even a propensity to commit criminal acts, the principle of all these propensities is inherent in our nature, and that the strength with which they manifest themselves, has, likewise, its source in a derangement of our organization?

When occasion offers, I shall cite examples of all these phenomena; for the present, I shall confine myself to the following facts. Father Mabillon possessed, in childhood, only the most limited faculties; but in the midst of this mediocrity, he received a rather severe wound on the head, and from this moment displayed superior talents. We were told, in our travels, of two well-known young men, to whom a similar accident happened. One of them, till his thirteenth year, could never succeed in anything. He fell from the top of a staircase, made several holes in his head, and, after his cure, pursued his studies with the most marked distinction. The other, when fourteen or fifteen years old, gave equally little hopes of himself. He fell at Copenhagen from the fourth story of a staircase, and after this fall, displayed great intellectual qualities. This change was not the only one. No one, till then, had ever remarked in him any bad quality; but, after this same fall, he exhibited a very bad character, which, in the sequel, deprived him of an eminent office, and caused his confinement in prison. I knew a girl, nine years of age, whose head received a blow on the right side. From that time, she complained of a pain which she felt on the left side of the head, and which corresponded to the place where the blow had been received. By degrees her arm became weakened, and almost paralyzed; her lower jaw trembled unceasingly; she was frequently attacked with convulsions. But, as an offset to these misfortunes, her intellectual faculties had acquired an uncommon degree of vigor; and though she was only in her eleventh year, the features of her face, and her singularly sedate behavior, would have made her pass for a grown-up woman.

Grétry, in his memoirs of himself, tells us, that he owed the development of his genius for music, to a violent contusion he received on the head, by the fall of a large log.

Haller* tells us of an idiot, who, having received a severe wound on the head, exhibited some understanding so long as the wound continued open; but relapsed into imbecility so soon as a cure was effected. The same phenomenon often happens in regard to the other organs. Haller again relates, that a person attacked with inflammation of the eye, acquired, in consequence, such energy in the organ of vision, during the course of his disease, that he could see even by night. It is thus with all the inert organs, and those whose development is defective; irritation developes or greatly augments their faculties. These examples prove, more and more, that the innateness of the properties of the soul and mind, and their dependence on organization, must pass for demonstrated truths.

---

* Phys. tom. iv. p. 293.

It is true, that in a state of health, man does not feel that he exercises his intellectual faculties by means of material organs; but he is equally unconscious that digestion, nutrition, and secretion are exercised in him by material apparatuses. Inattentive to the nature of his being, to the phenomena which relate to it, and to their causes, he hardly dreams that the difference which shows itself in him, according to the difference of age, in the exercise of his propensities and his faculties, is the result of the change which has taken place in his organization. "We must, consequently," as Herder says, "pardon the error of the people, when, in the midst of the dream of life, they regard the reason with which they are endowed, as independent of the senses and the organs, and raise it to the rank of a primordial and pure faculty. The observer of nature, on the contrary, who knows, by experience, the origin and the whole course of human life, and who, by the study of the history of nature, can trace the chain of the gradual perfection of the animal kingdom, up to man, is unceasingly reminded of the influence of organization. Every thing shows him, that man no more makes himself, as respects the use of his intellectual faculties, than he depends on himself for his birth." Malebranche has also said with reason, "that * the difference in the tastes of nations and even of individuals, for the various kinds of music, arises in a great measure from differences in organization; that, in general, our propensities and our faculties depend on the same cause; and that, consequently, we cannot better employ our time, than in seeking the material causes of the changes which befal us, in order to

---

* L. i. c. tom. i. p. 113 et 157.

learn to know ourselves. Let us hope that men will not long defer to acknowledge, generally, as Bonnet* says, that it is only by the physical, that we can penetrate into the moral nature of man, and that, consequently, the basis of all the philosophy of the human mind, is a knowledge of the functions of the brain.

SECTION IV.

OF FATALISM, MATERIALISM, AND MORAL LIBERTY.

In the preceding sections, I have proved, by indisputable facts, that the faculties of the soul and the mind are innate, and that their exercise depends on the organization. I have also shown that the origin of the moral and intellectual faculties, and the different modes in which they are manifested, can be explained in no other way. But, there is a kind of objection, which new truths never escape, especially when they may lead to great results. Ignorance, prejudice, envy, and often bad faith, endeavor to combat these truths. If they cannot attack the principles of a doctrine, they try at least to render it suspected, by the dangerous consequences of which they accuse it. Thus, it is reproached to the physiology of the brain, that it overturns the first foundations of morality and religion; that it eminently favors materialism and fatalism; and that, consequently, it denies free will. History teaches that the same has always happened to every discovery.

---

* Palingen, tom. i. p. 13.

The followers of the different schools of philosophy among the Greeks, mutually accused each other of impiety and of perjury. The people, in turn, detested the philosophers, and accused those who sought to discern the principles of things, of invading, in a presumptuous manner, the rights of the divinity. The novelty of the opinions of Pythagoras, caused his expulsion from Athens; those of Anaxagoras, threw him into prison. The Abderites treated Democritus as insane, because he wished to discover in dead bodies the cause of insanity; and Socrates, for having demonstrated the unity of God, was condemned to drink hemlock.

The same scandal has been renewed in all ages and among all nations. Many of those who distinguished themselves in the fourteenth century by their knowledge in the natural sciences, were punished with death, as magicians. Galileo, for having proved the motion of the earth, was imprisoned at the age of seventy years. Those who first maintained that climate influences the intellectual faculties of nations, made themselves suspected of materialism.

In general, nature sports in a singular manner, and yet always uniformly, with new truths and those who discover them. With what indignation and what animosity have men repulsed the greatest benefits. For example, the potatoe, Peruvian bark, vaccination, &c. As soon as Varolius made his anatomical discoveries, he was decried by Silvius as the most ignorant, the most senseless, the most infamous of men: Vesanum, literarum imperitissimum arrogantissimum, calumniatorem, maledicentissimum, rerum omnium ignarissimum, transfugam impium, ingratum, monstrum ignorantiæ, impietatis exemplar perniciosissimum quod pestilentiali halitu Europam venenat, etc. Varolius was reproached with dazzling his hearers by a captious eloquence, and with producing, artificially, the prolongation of the optic nerve to the thalami of the same name. Harvey, maintaining the circulation of the blood, was treated as a visionary; and the envy of his enemies went so far as to seek to ruin him with the Kings James I. and Charles I.; and when it was no longer possible to cut short the optic nerve, or to arrest the blood in its vessels, the honor of these two discoveries was suddenly transferred to Hippocrates. The physical truths announced by Linnæus, Buffon, and that pious philosopher Bonnet, by George Leroy, were represented as impieties which threatened to commence the total ruin of religion and morality; even the virtuous and generous Lavater has been treated as a fatalist and a materialist. Every where, fatalism and materialism, placed before the sanctuary of truth, served to deter the world from entering it. Every where, those, whose judgment the confiding public awaits, not only attribute to the author of a discovery, the absurdities of their own prejudice, but even renounce truths already established, as soon as they are opposed to their ends, and resuscitate exploded errors, provided they will serve to ruin the man who allows them their due weight.

Such is a faithful picture of what has happened to me. I have therefore, some reason to be proud of having experienced the same fate, as the men to whom the world is indebted for so great a mass of knowledge. It would seem that nature had subjected all truths to persecution, in order to establish them in a more solid manner; for, he who knows how to wrest one from her, presents always a front of brass to the darts hurled against him, and has always the strength to defend and to consolidate it. History shows us, that all the efforts and all the sophism, directed against a truth once drawn from the abyss, fall like dust, raised by the wind against a rock.

The examples of Aristotle and of Descartes ought in a special manner to be quoted, when we would make known the influence of prejudice on the good and bad fortune of new doctrines. The antagonists of Aristotle caused his books to be burned; afterwards they burned the works of Ramus, who had written against Aristotle, and declared the adversaries of the Stagyrite, heretics; and there were even legislative acts, forbidding to attack his philosophy under pain of the galleys. And yet no one now concerns himself with the philosophy of Aristotle! Descartes was persecuted because he maintained innate ideas, and the University of Paris caused his books to be burned. He had written the sublimest thoughts on the existence of God; Voet, his enemy, accused him of atheism.* Still later, this same university declared itself for innate ideas; and when Locke and Condillac attacked innate ideas, there was a cry on all sides of materialism and fatalism.

It is thus, that the same opinions have been regarded sometimes as dangerous, because they were new, sometimes as useful, because they were old. We must then conclude to take pity upon man; that the judgment of cotemporaries on truth or error, or on the dangerous or innocent consequences of a doctrine, is singularly suspicious; and that the author of a discovery ought not trouble himself about any thing but to know whether he has actually discovered the truth. "Reason," says Anchillon,† following Bonnet,‡ "knows neither useful truths nor dangerous truths. What is, is; there is no compromising with this principle. It is the only answer we need make; and to those, who, subjecting every thing to utility, ask what is this good for? and to those, who, always yielding to their fears, inquire 'whither will this lead?' Jesus, the son of Sirach, has already said, § 'We must not say, what good will this do?' for the use of every thing will be found in its season; but we cannot abuse the truth.'"

I do not pretend to say, that ignorance and ill faith will not abuse my doctrine; for what will not man abuse? Tell him that he must expiate his crimes, and you will see him, in his superstition, immolate his children. Have not Lucretius and his disciples employed all their wit to show, that the belief of the immortality of the soul, keeps up the fear of death, and poisons all the enjoyments of life? Yet, who knows not, that this same belief is the basis of social happiness, of order, and of morality, the most effectual consolation in the crosses of life. To found hospitals for lying-in women and foundlings, to introduce inoculation or vaccination; to place lightning-rods on houses, is, in the eyes of some, an inestimable benefit; of others, an outrage against Providence. In a word, man makes of every thing a subject of offence; but, as St. Bernard* says, we must judge differently of the offence of the ignorant, and of that of the Pharisees. The former are offended through ignorance, the latter through ill-will; the former, because they know not the truth; the latter, because they hate it.

---

* Malebranche Recherche de la vérité, t. 2. p. 49.
† Melange de lit. et de philosophie, Paris, 1809. tom. 2. p. 42.
‡ Palingen, tom. 1. p. 42. § Ecclesiasticus, ch. 39. ver. 26.

Malebranche† thus represents the enemies of new truths: "It is not the persons of true and solid piety, who ordinarily condemn what they do not understand, but rather the superstitious and the hypocrites. The superstitious, through servile fear, are startled as soon as they see an active and penetrating spirit. For instance, one need only give them some natural reasons for thunder, and its effects, to appear an atheist in their eyes. But the hypocrites make use of the appearance of sacred truths revered by all the world, in order to oppose new truths by particular interests. They attack truth with the image of truth; and in their hearts make a scoff of what all the world respects; they establish for themselves, in the minds of men, a reputation the more solid and the more formidable, as what they thus abuse is more sacred. These persons are, then, the strongest, the most powerful, the most formidable enemies of truth."

---

* De præceptis et disciplinâ.

† L. c. tom. 2, p. 48.

I, too, have something to do with the superstitious, and still more with the hypocrites; but I shall not trouble myself with these last, except to answer their objections.

As for those who doubt in good earnest, I shall seek to let them know the true spirit of my doctrine, on all points which can cause them disquiet. I shall prove to them that my principles are in accordance, not only with the nature of things, but, with the experience and the testimony of the greatest thinkers, and of respectable men, who have most loved the human race; and, as the object is to rectify opinions of the highest importance, they will not be surprised, if I adduce the testimony of the fathers of the church, of the apostles, and even of Jesus Christ. What is there more proper to confound hypocrisy, and to tranquillize the most timorous piety, than the encouraging accordance of my principles with the teaching of those, who, without captious reasonings, without vain subtilties, have so well developed the nature of man; who have mainly occupied themselves in contributing to his happiness, who have revealed to us a morality the purest, and the most appropriate to our wants; who, in fine, have so frequently sealed with their blood, eternal truth?

To avoid all confusion of ideas, I shall treat separately of materialism, of fatalism, of moral good and evil, and of free will.

Of Materialism.

By the term *materialism*, men designate things entirely different. Sometimes, the materialist pretends that there is no other existence than that of matter, and that all the phenomena in the world are simply the effects of matter. The ancient church bestowed the name *materialists* on those who taught that matter existed from all eternity, and that, consequently, the Deity had not drawn the world out of nothing. This sort of materialism ordinarily leads to the denial of the existence of a

Supreme Intelligence, of a God, and then it is confounded with atheism. It is not of such materialism that my doctrine is accused. If any one can become an atheist, it is not the man who occupies himself on a large scale with the study of nature, because, at every step, he meets phenomena, which he cannot explain by any of the known laws of the material world. He perceives not only the incomprehensible wonders of particular organizations, but also the wise connection of the whole. Nothing in the universe is insulated; all worlds have been placed in reciprocal relations; inanimate nature is so with living nature; all living beings are so with each other. Who, then, can mistake a cause of all causes, a supreme law of all laws, an intelligence of all intelligences, an ordainer of all orders—in a word, a God ?

Another species of materialism is professed by those who maintain, that man is not composed of two substances essentially different, that is, of a body and a soul; that all the phenomena, which are ordinarily attributed to the soul, are only the results of the combinations and of the forms of matter; or, that the soul is only a fluid of extreme tenuity, diffused through the whole body, which gives to each part its proper life. This second species of materialism, includes a doctrine not less erroneous than the other, and thus destroys the belief of the immortality of the soul. Yet, its partisans would fain convince us, that this consequence is unfounded. "The principles of matter," say they, "are in their nature as eternal, as indestructible, as the spiritual substance; these two substances can be annihilated only by an express order of the Deity, and, consequently, there would be nothing absurd or dangerous in thinking that the immortal soul may be material: we ought, on the contrary, still more to admire the Creator, who has united so many qualities to matter, and raised it to the faculty of thought and of will. If," continue these philosophers, "we choose to regard the soul and the body, as two substances totally different, we can no more explain the action of one upon the other, than we can comprehend how a material substance can possess thought; so that from the incomprehensibility of the last idea, it does not follow that one doctrine is more true than the other. Hence," say they again, "men for a long time have regarded thought as a property of matter; and those, who teach the resurrection of the body, are equally convinced of the immortality of matter. In fine," they add, "we can gain only a very defective notion of matter, and a purely negative notion of the soul, by representing to ourselves a substance deprived of all the known properties of matter, and retaining the faculties of thought and will; while reason can no more attain to the essence of matter than of mind, and, consequently, we cannot reasonably maintain, that extension and other properties are inconsistent with the essence of the soul, nor that the faculty of thinking is incompatible with the essence of the body."

My doctrine has nothing in common with this hypothesis, nor, consequently, with this species of materialism. I have always declared, that I make no research into the nature of the soul and the body, and that I do not wish to explain the essence of any of these faculties. I confine myself to phenomena. Now we see, that in this world, no faculty manifests itself without a material condition; all the faculties, even those which we call mental, act only by means of matter, and their actions can only be perceived by means of material organs. If, then, I am to be called a materialist, because I say that all the dispositions are innate, and that their exercise depends on material organs, it ought to be proved, that in so saying, I acknowledge no other substance than that of matter, and that I reject every other faculty. The observations which follow, will prove how unjust is this inference.

I call the material condition which renders the exercise of a faculty possible, *an organ*. The muscles and the bones are the material conditions of motion, but are not the faculty which causes motion; the total organization of the eye is the material condition of sight, but is not the faculty of seeing. I call a material condition, which renders the manifestation of a moral quality, or an intellectual faculty possible, *an organ of the soul.* I say, that man, in this life, thinks and wills, by means of the brain; but, if it be thence concluded, that the being, willing and thinking, is the brain, or that the brain is the being, willing and thinking; it is, as if one should say, that the muscles are the faculty of motion; that the organ of sight, and the faculty of seeing, are the same thing. In both cases the faculty is confounded with the organ, and the organ with the faculty.

This error is the more unpardonable, as it has been committed and corrected very frequently. St. Thomas* answered in this manner, to those who confounded the faculty and the instrument: "Although the mind be not a corporeal faculty, the functions of the mind, such as memory, thought, imagination, cannot take place without the aid of corporeal organs. Hence, when the organs, from any derangement, cannot exert their activity, the functions of the mind are also deranged, and this is what happens in phrensy, asphyxia, &c. Hence, also, it happens, that a fortunate organization of the human body has always, for its result, distinguished intellectual faculties."

In the fourth century, St. Gregory of Nyssus, compared the body of man to an instrument of music. "It happens," says he,† to many skilful musicians, not to be able to give proofs of their talent, because their instrument is in a bad state. It is thus, that the functions of the soul can duly exercise themselves, only, when the organs of these functions conform to the order of nature. But these functions cease or are arrested, when the organs cannot subserve the proper motions; *for, it is a peculiarity of the mind, that its faculties cannot be duly exercised except by healthy organs.*" In another passage[*] he says, that the soul begins to exist at the same time as the body; that it is present, though it may not manifest itself; just as the form of the future man is contained in the seed; that the soul can only make itself known when the successive development of the corporeal organs permits it.

---

* Contra gentiles, ch. 84, num. 9.

† De hominis opificio, c. 12.

If we do not take into consideration the difference which exists between the organs and the faculties, and if, to be a materialist, it is sufficient to declare that the exercise of the intellectual faculties depends on the organization, who is the writer, ancient or modern, whom we have not the right to charge with materialism?

Either we must admit the whole body as the instrument of the moral and intellectual forces, or we must say that the brain is this instrument; or, finally, we must adopt several distinct instruments in the brain. It is to these three propositions that all opinions may be referred. Now it is evident that each of these propositions has, for its result, to make the intellectual qualities and moral faculties depend on material conditions.

In the first case, it is the body which we admit as the necessary condition of the exercise of the faculties of the soul. If this were materialism, it is the Deity himself who would be the cause of our error. Is it not God, says (Boerhaave,) who has united the soul so closely to the body, that its faculties are defective when the organization is defective, and that they are disturbed when the body is diseased? Saturninus[†] derives the differences in the moral and intellectual qualities of man, from the different structure of his organs. All the ancient moralists, Solomon,[‡] St. Paul,[§] St. Cyprian, St. Augustin,[||] St. Ambrosius,[¶] St. Chrysostome,[**] Eusebius,[††] &c., regard the body as the instrument of the soul, and plainly profess, that the soul always governs itself by the state of the body. Philosophers, also, admit with Herder,* that all the faculties, even thought, depend on the organization and the health, and that if man is the most accomplished being of the terrestrial creation, it is because the most perfect organic faculties which we know, act in him by the most perfect instruments of organization, in which these faculties are inherent. Lavater† accuses those, who, in this matter, allow nothing to the primitive organization and formation, of insulting reason and of defending a system belied in every living being.

---

[*] L. c. ch. 29 and 30.

[†] Pluquet du fatalism, tom. 1. p. 158.

[‡] Wisdom, ix. ch. 15 v.

[§] 18 Ep. to tom. ch. xiii. 11 v.

[||] Lib. de libero arbitorio.

[¶] Lib. 1. de off.

[**] Hom. 2, 3 Super. epist. ad. Heb.

[††] Preparat. Evangel. lib. 6. num. 6.

In fine, from Hippocrates and Galen, physicians and physiologists have all established the same doctrine; and whatever diversity there may be in their opinions, the basis of all is the same. Some make the moral character depend on the organs of automatic life; while others seek for the principle of the passions in the numerous nervous plexuses and ganglia of the chest and abdomen; others explain the thoughts and desires by deriving them from the liver. But, it is evident that one party, as well as the other, subjects the faculties of the soul to material conditions; and, consequently, were this language sufficient to charge me with materialism, the same charge would apply to all physicians, all philosophers, and all the fathers of the church.

Shall we, then, reserve the charge of materialism for those, particularly, who regard the brain as the organ of the soul? This doctrine is not less diffused than that of which we have just spoken. We find it already in the sect of Pythagoras. The physiological physicians, and the philosophers, make every thing depend on the brain; at least, the qualities of the mind, attention, memory, imagination, &c. Boerhaave and Van Swieten attribute to the brain, not only the ideas, their combinations, and the judgment, but also the moral character of man, and all his human essence. Some, among them, maintain that the impressions received, leave traces in the brain; they explain, by these traces, memory, the comparison of ideas, and judgment. Others, with Malebranche, attribute to the firmness and softness, the dryness and moisture of the cerebral fibres, the difference of the faculties and propensities. Haller, Buffon, and Bichat,* regard the inequality of the two cerebral hemispheres, as the cause of mental alienation. Here, then, are so many opinions tending to materialism.

---

* L. c. th. 2. s. 108.

† Essai. Phys. La. Hage. tom. 1. p. 144.

There are none, not even my adversaries, who are not forced, either to admit the brain to be the organ of the soul, or to suppose a very subtle material substance, to serve as a medium of communication between the soul and the body. Such is the case with professors Ackermann, at Heidelberg, and Walter, at Berlin, whose objections have been repeated by most of my opponents. The first does not confine himself to regarding the brain as the organ of the soul; he also admits an extremely subtle nervous medulla, soft and almost fluid, which converts itself, by degrees, in the cavities of the brain into animal vapor, and which becomes a medium between the soul and the nerves of sense.† Walter says, "in the infant, the brain is like pap; in old age it is hard, and in middle life of an intermediate consistence. The brain must have a certain degree of firmness and elasticity, in order that the soul may exhibit itself in its greatest brilliancy, and the man attain his greatest mental perfection. This mode of viewing the subject does not lead to materialism: it has no other object than the reciprocal union of the soul and the body." Thus, there is no writer, who does not make the moral and intellectual functions depend on material conditions, and my adversaries, if I were a materialist, would be no less so than myself.

---

* Sur la vie et la mort, p. 16.

† Beantwortung der Ackermann, schen Beurtheilung und Widerlegung der Gall's schen Hirn-Schedel-und Organerlehre. Halle, 1806, § 32.

Finally, do my opponents think to impute materialism to me, because in place of one organ of the soul I admit several? But, is one more or less a materialist, by admitting one or several organs? Is the organ immaterial because it is single? Whether the whole body, or the whole brain be the sole organ of the soul, the body and the brain belong to matter. The admission of several organs in the brain, makes no difference, in that respect. The hand is not less material than the five fingers.

It would seem that my adversaries must have felt the want of vigor in their deductions; for, in order to save, at least in appearance, the simplicity of their organ of the soul, they have been obliged to imagine a central point, where the soul might have its seat, and where it might perceive all external and internal impressions. "The organization," says Prof. Ackermann,* "though divisible into several organs, yet offers one complete whole, in which all the organs depart from one point, and in which they must all re-unite." But, unhappily, he is obliged to concede, that the anatomy of the brain does not offer this principal point, where all the nerves of sense unite, which transmit sensations to the organ of the soul. On the contrary, I have proved, in the anatomy of the brain, that its different parts have their origin in different points, and spread themselves in large nervous expansions in places equally different. Van Swieten and Tiedemann have already remarked, that a general point of union, where impressions of all sorts should arrive at once, would produce only confusion. Yet Professor Ackermann thinks, that such a union of the divergent nerves would be very possible, by means of an intermediate substance in which they should terminate; and as, according to his opinion, this might happen, he concludes peremptorily, that it is so. But to what purpose this point of union? This intermediate, very subtle substance, must occupy a space at least equal to that of the divergent nerves, or it could not possibly come into contact with them ; and, supposing this point to be as small as an atom, would it, therefore, be any the less material ?

---

* L. c. s. 91.

Supposing that the plurality of organs has no existence in the manner that I shall show it to exist in my second volume, all those who have regarded the whole body, or the brain alone, as the organ of the soul, are not less liable than myself to the charge of having admitted more than one organ of the soul. It is in fact certain, and all anatomists agree, that the total of animal life, and, consequently, the brain, is double. This organ is composed of two hemispheres, each of which comprehends the same parts. Thus we have all a double organ of the soul, and we should all be materialists, if it were sufficient, in order to be such, to believe in the plurality of organs ; and in this manner, the Deity himself would have established materialism in an incontestable manner. If I am a materialist because I admit more than a single faculty of the soul, and because I recognise several primitive faculties, I ask if the ordinary division of the faculties of the soul into understanding, will, attention, memory, judgment, imagination, affections and passions, expresses only a single primitive faculty ? If it be said, that all these faculties are only the modifications of a sole and single faculty, who will prevent me from advancing the same assertion of the faculties which I admit ? It is very evident, that we remark different properties of the mind and soul in man. It must follow, then, either that the soul is composed of different faculties, or that a single and same soul produces different phenomena by means of different organs. Now it is infinitely easier to imagine the unity of the soul in the last case than in the first ; and, consequently, materialism is no longer a bugbear which ought to deter any one from my doctrine, any more than from others.

Analogy, again, comes in support of this last proposition. Every one allows, that several wholly different functions, which we feel obliged to attribute to the soul, take place in us by means of different organs. The voluntary motions, for instance, are executed by means of the nervous systems of the vertebral column: the functions of sense are each attached to a different internal and external apparatus.

It is true, that men are not willing to admit the comparison of the voluntary movements and the functions of the senses with the moral qualities and intellectual faculties, because these first functions are regarded as material. But, as these functions are performed with consciousness, and in part voluntarily, this would imply that organs, purely material, have consciousness and will. This doctrine would approach much nearer to materialism than mine. We should even find ourselves obliged, after the example of a great number of philosophers, to include among the properties of matter, memory, intelligence, imagination, the affections, passions, propensities and inclinations. What could prevent these materialists from going one step further, and allowing to matter other faculties, as the reason and the will, which are called, by preference, faculties of the soul and mind.

The case is very different in my manner of viewing the subject, and my doctrine is not open to any of these objections. There exists, according to my view, only one single principle, which sees, feels, tastes, hears, and touches, which thinks and wills. But, in order that this principle may gain a consciousness of light and sound, that it may feel, taste and touch, that it may manifest its different kinds of thoughts and propensities, it has need of different material instruments, without which the exercise of all these faculties would be impossible.

It results, then, from this discussion, that those who charge me with materialism, because I regard material conditions as indispensable to the exercise of the faculties of the soul, confound these faculties with the instruments, by means of which they act. It also results, that the brain being double, anatomists are forced to admit the plurality of these material conditions: it finally results, that the profoundest writers of all ages have subjected the exercise of the faculties of the soul and mind to material organs; and that, consequently, if this truth establishes materialism, we must make this charge against all the physicians and philosophers that ever flourished, and even against the fathers of the church, and the apostles.

Of Fatalism.

We have seen that, under the name of materialism, very different things have been included; it is the same with fatalism.

If it be affirmed that every thing in the world, and even the world itself, is *necessary;* that whatever is and happens, is the effect of chance or of a blind necessity, and that no Supreme Intelligence ever has, or at present does concern itself with existing objects, this doctrine is a species of fatalism, which differs very little from atheism. But this fatalism has nothing in common with the doctrine, which asserts the innateness of the faculties of the soul and mind, and their dependence on organization. I cannot, therefore, in this sense be accused of fatalism.

Another species of fatalism is, that by which it is taught that, in truth, there exists a Supreme Being, the Creator of the Universe, as well as of all the laws and all the properties which exist in it; but that he has fixed these laws in an immutable manner, so that what happens, cannot happen otherwise. In this system, man is necessarily drawn along by the causes which lead him to act, without his will having any influence. His actions are always a necessary result, without voluntary choice, and without moral liberty; they are neither punishable nor meritorious, and the hope of future recompense vanishes, as well as the fear of future punishment.

This is the fatalism of which superstitious ignorance accuses the physiology of the brain; that is to say, the doctrine of the functions of the noblest organ on earth. ? I have incontestably proved, that all our moral and intellectual dispositions are innate; that none of our propensities, none of our talents, not even understanding and will, can manifest themselves, independently of this organization. Add to this, that man has no part in endowing himself with the faculties proper to his species, nor, consequently, with such and such propensities and faculties. Now, must we infer that man is not master of his *actions?* that there exists no free choice, and, consequently, can be no merit or demerit in any action?

Before refuting this conclusion, let us examine, with all the frankness worthy of true philosophy, to what degree man is subjected to the immutable laws of creation; to what extent we must acknowledge a necessity, an inevitable destiny, or fatalism? To disentangle these confused notions, is the best means of placing the truth in a clear light.

Man is obliged to acknowledge the most powerful and most determinate influence of a multitude of things on his happiness or misery, and even on his whole conduct, without being able, of his own will, to add to or diminish this influence. No one can call himself into life: no one can choose the period, the climate, the nation, where he shall see the light of day: no one can fix the manners, the customs, the laws, the form of the government, the religion, the prejudices, the superstitions, with which he shall be surrounded from the moment of his birth: no one can say, I will be servant or master, elder or younger; I will have robust or feeble health, I will be a man or woman; I will have such a temperament, such inclinations or talents; I will be foolish, idiotic, simple, intelligent, a man of genius, violent or calm; of a sweet or peevish temper, modest or proud, heedless or circumspect, cowardly or inclined to debauchery, submissive or independent: no one can determine the prudence, or the folly of his instructors; the hurtful or useful examples he shall meet, the results of his connections, fortuitous events, the influence which external things shall have on him, the condition of himself or his parents; or the sources of the irritation which his passions and his desires shall experience. So far as the relations of the five senses to external objects, so far as the number and the functions of the viscera and the limbs have been fixed in an immutable manner; so far is nature the source of our inclinations, our sentiments, our faculties. Their reciprocal influence, their relations with external objects, have been irrevocably determined by the laws of our organization.

As it does not depend on us to hear and see, when objects strike our eyes and our ears, so are our judgments the necessary results of the laws of thought. "Judgment," says M. de Tracy with reason, "is independent of the will, in this sense, that when we perceive a real relation between two of our perceptions, it is not free for us to feel it otherwise than as it is; that is, as it must appear to us by virtue of our organization, and such as it would appear to all beings organized like ourselves, if placed precisely in the same position. It is this necessity, which is essential to the certainty and reality of all our knowledge. For, if it depended on our fancy to be affected by a large thing as if it were small; by a good thing as if it were bad; by a true thing as if it were false, there would no longer exist any reality in the world, at least for us. There would be neither largeness nor smallness, good nor evil, falsehood nor truth; our fancy alone would be every thing. Such an order of things cannot be conceived, and it implies inconsistency."*

Since the primitive organization, the sex, age, temperament, education, climate, form of government, religion, prejudices, superstitions, &c., exercise the most decided influence on our sensations, ideas, and judgments, and the determinations of our will; on the nature and force of our propensities and talents, and consequently on the primary motives of our actions, we must confess that man, in many of the most important moments of his life, is subjected to the power of destiny, which sometimes fixes him to a rock, like the inert shell-fish, and sometimes raises him in the whirlwind, like the dust.

---

* Idéologie, p. 208.

It is not then surprising, that the sages of Greece, the Indies, China, and Japan, that the Christians of the east and west, and the Mahometans, should have mingled with their several doctrines this species of fatalism. From periods the most remote, men have derived from the Deity our moral and intellectual faculties; in all ages it has been taught that all the gifts of men come from heaven; that God from all eternity has chosen the elect; that man, of himself, is incapable of any good thought; that all the difference which exists between men, with respect to their qualities, comes from God; that it is only those, to whom it has been given by superior power, who are capable of certain actions; that each one acts according to his innate character, just as the fig-tree does not bear grapes, nor the vine figs, and as sweet water cannot flow from a bitter fountain; in fine, that all cannot find out the mysteries of nature, nor the secrets of God.

It is this same fatalism, this same inevitable influence of superior powers, which has been taught us by the fathers of the church. St. Augustine,* would have this same doctrine preached, in order to exhibit clearly the belief of the infallibility of Providence, and our entire dependence on God. "As," says he,† "no one can give himself life, so no one can give himself understanding." If some persons do not understand the truth, it is, according to him, because they have not received the necessary capacity to comprehend it. He refutes the objections, which would be hence drawn, against the justice of God, and remarks, that the grace of God has no more distributed temporal goods equally to all, such as address, strength, health, beauty, genius, and taste for the arts and sciences, riches, honors, &c. St. Cyprian[*] had already said, that we ought not be proud of our qualities, for we have nothing of ourselves. but ourself

---

* Lib. de bono perserverantiæ, ch. 20—2.

† Lib. de fide, c. 1.

If men had not always been convinced of the influence of external and internal conditions on the determinations of our will or our actions, why, at all times, and among all nations, should they have made laws, civil and religious, to subdue and direct the desires of men? There is no religion which has not ordained abstinence from certain meats and drinks, fasting, and the mortification of the body. From Solomon down to our own days, I know no observer of nature, who has not acknowledged that man, both physically and morally, is wholly dependent on the laws of creation.

Moral Good and Evil.

The same laws to which I have alluded, prove, that the conviction has always existed, that mankind are inclined to evil. But, does it not seem contradictory, that evil should have been created by an infinitely good Being?

Some, to escape this contradiction, have ignorantly admitted two principles, a good being, and a wicked being, almost equally powerful, and existing in a state of perpetual warfare.

Others have maintained, that all the original qualities of man have been given him for a good end; that none leads necessarily to evil, and that even the best things in the world may be prostituted to a bad purpose. Eusebius[†] says with Philo, that matter in itself is not wicked, and cannot be the cause of evil, which consists only in action, and in the bad use of original faculties.[‡]

---

[*] Lib. de conceptione et gratia, ch. viii.

[†] Euseb. præparat, evang. lib. 7. n. 22.

[‡] Evil is not a substance; and there is nothing bad, but what the abuse of man has made so. St. August. chap. 20.

Others add, that in order to decide that any thing is an evil, we must know, what man cannot know, the immense and universal end of creation.

Others, in fine, not being able to deny the existence of moral evil, explain its origin by free will. But, as soon as we admit free will, we pre-suppose moral good and evil; for, what would free will be, if there were not two distinct things, good and evil, between which the free man can choose? May it not even be objected, that this same boasted free will, since it occasions so much evil, is itself an evil? The instant we recognize free will, does not man find himself on the slippery edge of the precipice? It is said, and I also say, that man abuses his liberty; but what motive has man to abuse it, unless something stirs within to excite him to illegal actions?[*]

I am bitterly reproached for admitting in man, innate evil inclinations and propensities to injurious acts; and my antagonists especially, never fail to remark, that, among these evil inclinations, are found the propensity to theft, and the propensity to murder.

Let these admirers of the excellence of the human species, answer me why, in all ages and in all countries, men have robbed and murdered, and why no education, no legislation, no religion, neither prison, hard labor, nor the wheel, has yet been able to extirpate these crimes? Could these men have robbed and murdered, for the sole pleasure of exposing themselves to these dangers without any temptations? Will you throw the fault on their ancestors, as if their example had given rise to these unholy inclinations? Then explain to me, how the first examples could have occurred, and how children and grand-children, who had dispositions essentially good, should have become so powerfully disposed to robbery and murder, contrary to their nature?

---

[*] Nous sommes pécheurs et enclinus au mal. *Catéchisme a l'usage des églises de l'empire Francais.* 1806. p. 23.

Besides, allowing it to be education, and not nature, which gives us vicious propensities, the difficulty always remains the same, because education is not in the power of him who receives it; and education never could develop either good or evil inclinations, did not their germs positively belong to human nature. In vain will you endeavor, by any education, to change the pigeon into an eagle, and the eagle into a pigeon.

Unhappily, it is not robbery and murder only, which prove the evil dispositions of men. The just man always has had, and always will have reason, to complain with Moses, of the bad actions and dispositions of men. The Lord said that the malice of men, who lived on the earth, was extreme, and that all the thoughts and purposes of their hearts were altogether wickedness. Gen. vi. 5. Men always have been, and always will be, inclined to all sorts of perverse actions; they have always been besieged by temptations within and without; they always have been, and always will be, tormented by carnal desires, covetousness, ambition, pride, &c. The world never has ceased, and never will cease, to be the theatre of all vices; such as lying, calumny, jealousy, envy, avarice, usury, immodesty, vengeance, adultery, perjury, rape, incest, idolatry, drunkenness, discord, enmity, injustice, &c.

The good man draws good things from the good treasure of his heart, and the wicked man draws evil things from the evil treasure of his heart. St. Luke vi. 45. For out of the heart proceed evil thoughts, murders, adulteries, fornications, thefts, false witness, blasphemies. Matt. xv. 19. They are full of all unrighteousness, fornication, wickedness, covetousness, maliciousness; full of envy, murder, disputes, deceit, malignity; whisperers, backbiters, haters of God, deceitful, proud, boasters, inventors of evil things, disobedient to parents; without understanding, covenant-breakers, without natural affection, implacable, unmerciful. Epistle to Rom. i. 29, 31. Now the works of the flesh are manifest, which are these: adultery, fornication, uncleanness, lasciviousness: idolatry, witchcraft, hatred, variance, emulations, wrath, strife, seditions, heresies, envying, murders, drunkenness, revellings, and such like. Galatians v. 19, 21. In this world we are born with our temptations, and the flesh sometimes leads us to do good works, and sometimes excites us to do bad ones. [S. Gregory, Hom. ii.] As it is written, there is none righteous, no not one. Rom. iii. 10. For the good that I would, I do not, but the evil that I would not, that I do. Now if I do that I would not, it is no more I that do it, but sin that dwelleth in me. I find then a law, that when I would do good, evil is present with me. Rom. vii. 19, 21. But every man is tempted, when he is drawn away of his own lust and enticed. Nulla mens est, nulla anima, que non recipiat etiam malarum motus agrestes cogitationum. S. Ambros. lib. de Noe. &c. No man can say that he perceives in his thoughts, in his propensities, nothing but what is innocent and virtuous. Let him, who, with his hand on his heart, will contradict this, take the first stone and cast it at me.

Thus it is in vain for you to be humbled for your weakness and your imperfection; you must acknowledge the moral as well as the physical evil, and submit yourself for both to the incomprehensible decrees of the Creator. Both exist, not, as some say, because the Creator permits it; for such a state of things would suppose on the one hand a mere accident, and on the other, the impotence of the Creator; but they exist because they enter into the plan of eternal Providence. As temporal advantages are distributed unequally and without any respect of persons, so physical evils frequently happen without the fault of him who is the subject of them. Is there not a continual opposition in all nature? Do not the air, the earth and the water, offer a perpetual scene of destruction and production, of suffering and pleasure? What have animals done, that man to whom they render the most useful services, should feed them ill, and maltreat them in every way? If parents beget children in the excesses of debauch, why must the children themselves expiate the fault? When the storm carries away the house of the idle rich man, does it spare the poor and industrious vine-dresser? "There is a just man that perisheth in his righteousness, and there is a wicked man that prolongeth his life in his wickedness." Eccles. vii. 16. "All things come alike to all: there is one event to the righteous and to the wicked; to the good, and to the clean, and to the unclean; to him that sacrificeth, and to him that sacrificeth not; as is the good, so is the sinner; and he that sweareth, as he that feareth an oath. This is an evil among all things that are done under the sun, that there is one event to all; yea, also the heart of the sons of men is full of evil, and madness is in their heart while they live, and after that they go to the dead." Ibid, ix. 2, 3. "I returned, and saw under the sun, that the race is not to the swift, nor the battle to the strong, neither yet bread to the wise, nor yet riches to men of understanding, nor yet favor to men of skill; but time and chance happeneth to them all. For man also knoweth not his time; as the fishes that are taken in an evil net, and as the birds that are caught in a snare; so are the sons of men snared in an evil time, when it falleth suddenly upon them." Ib. ix. 11, 12.

I have said that evil dispositions and perverse inclinations, enter into the plan of eternal Providence. In fact, what would those say, who affect to act as the apologists for the happiness and the virtue that is to come, if it was proved to them that, without propensity to evil, there would be neither virtue, nor reward, nor punishment? For, as we have already said, what can be called liberty, if we do not mean by this expression, the power of choosing between good and evil? If men had no propensity except for good, where would be the possibility of doing evil? And without this possibility, on what could we found the idea of vice and virtue, the merit and demerit of actions? He who does not do evil, because nothing tempts him to do so, is certainly to be envied, but he cannot pretend to virtue, nor to the merit of actions.[*] What would be the merit, the chastity of those of whom Jesus Christ says[†] that they came eunuchs from their mother's womb. Why boast so much the denial of one's self, if it supposes no injurious propensities which one has succeeded in subduing?[‡] All philosophers, ancient and modern, Plato, Aristotle, Cicero, Seneca, Pascal, Kant, as well as the fathers of the church, have founded the notion of virtue on the victory, which we obtain over our vicious propensities.[§] Can the old man, who has passed his youth in dissoluteness, be called continent and moderate, because his desires have abandoned him?[‖] It is precisely those evil propensities, which many persons consider incompatible with the glory of God, with the dignity of man, and the welfare of society, which give to man the possibility of being virtuous and vicious: it is only by means of these that actions can have merit or demerit; and whoever should extinguish in man the belief in perverse inclinations, would also extinguish in him the fear of punishment, and the hope of future reward.

---

[*] Non virtus est, non posse peccare. Cum renunciatur improbitati. Statim adsciscitur virtus. Egressus enim malitiæ virtutis operatur ingressum *St. Ambrosius.* Posse peccare datum est primo homini, non ut proinde peccaret, sed ut gloriosior appararet, si non peccaret, quum peccare posset. *St. Bernardus, de libero arbitrio.*

[†] St. Matthew xix. 12.

[‡] Castitas est virtus sub jugo rationis impetum libidinis refrenans. St. Augustinus de finibus.

[§] Vita nostra in hac peregrinatione non potest esse sine peccato, sine tentatione; quia profectus noster per tentationem nostram fit, nec sibi quisquam innotescit, nisi tentatus; nec potest coronari, nisi vicerit: nec potest vincere, nisi certaverit; nec potest certare, nisi inimicum et tentationes habuerit. *S. August. super psalm.* 60. Caro si sale non aspurgatur, quamvis sit sana et præcipua, corrumpitur; ita et anima nisi tentationibus assiduis saliatur, continuo resolvitur et relaxatur. *Origines, super lib. arbitr. N. S. Chrystomus, Hom. iv. de pænitentia.* Nulla sine labore virtus est. *S. Ambrosius in psalm.* 118. Non est gloriosa victoria, nisi ubi fuerint gloriosa certamina. *S. Ambrosius de off.* Nulla sunt sine tentationum experimentis opera virtutis; nulla sine pertubationibus fides; nullum sine hoste certamen, nulla sine congressione victoria. *Leo*, sermo 35; etc.

[‖] Quidam in juvente luxuriose viventes, in senectute continentes fieri delectantur et tum eligunt servire castitati, quando libido eos servos habere contempsit. Nequaquam in senectute continentes vocandi sunt qui in juventute luxuriose vixerunt; tales non habent præmium, quia laboris certamen non habuerunt; eos enim exspectat gloria, in quibus fuerunt gloriosa certamina. *Isidor. de summo bono*, lib. i. c. 31.

How do primitive Dispositions, essentially good, degenerate into evil Propensities?

Bad propensities and moral evil are, therefore, inherent in human nature, notwithstanding the efforts which some men think it their duty to make, to conceal their true origin.*

Let us, as physiologists, examine how far the fundamental qualities and faculties of man, may become evil propensities, and, consequently, the source of moral evil.

The brain, the instrument of the moral qualities and intellectual faculties, is essentially the same in all well-constituted men; but the various integrant parts of the brain, or the different organs, are not equally developed in all. The relations of these developments are infinitely varied. Hence, the infinite variety in the moral and intellectual character of men.

In the same individual, all organs do not receive the same degree of development. It follows, hence, that no man possesses all qualities and all faculties to the same degree.

The function, or the tendency of the activity of an organ, is graduated according to the degree of its development or excitement; the function of an organ, moderately developed, is not similar to the defective or excessive development of the same organ. The propensity to propagation is, certainly, the most necessary institution of the Creator; but, when its organ is too little developed, we experience impotence, indifference, or even aversion to the other sex. Too much developed, on the contrary, it degenerates into a propensity to salacity and all its excesses. The love of children is one of the first qualities of a mother; but too small a development of the same organ produces indifference, and even hatred to children, and may become one of the causes of infanticide. This organ, too much developed, is the source of the weaknesses which fathers and mothers allow themselves toward their children. There have even been instances of females, condemned to celibacy or to sterility, being tempted to commit the crime of child-stealing. The instinct of self-defence, a necessary quality, becomes, in its exalted action, courage, inclination for combat, temerity; in its depression, on the contrary, timidity, dastardliness, cowardice. No one will say, that it is a misfortune for man to be destined to live on flesh, as well as on vegetables; yet, it is an excessive activity of this same inclination, which produces, step by step, insensibility to others' sufferings; pleasure at causing and witnessing pain; the inclination to destroy, kill, burn. The sentiment of property, innate in man, and even in animals, will always be one of the principal bonds of social order; but, give too much energy to this same sentiment, and the man will be tempted by inclination to fraud, usury, corruption, venality, theft. The love of honor, the source of so many noble actions, if too eager and ill-directed, seeks flattery, luxury, ostentation. Noble pride degenerates into presumption, insolence, contempt, and despotism. It is thus, that raillery, mockery, the spirit of sedition and independence, insubordination, disobedience, obstinacy, credulity, superstition, idolatry, have their origin in dispositions primitively good, and essential to the human race.

---

* It would be more correct to say the *abuse* of the propensities, than to denominate them bad. There can be nothing *bad*, absolutely, in nature.

Qualities and talents, peculiarly distinguished, are of the same origin. It is always a very favorable development of an organ, an unaccustomed energy of its function, which produces the disposition to benevolence, religious sentiments and ideas, the talent for poetry; without such development there would be neither great musicians, nor great sculptors, nor great orators; all the arts and all the sciences would remain in a state of obscure mediocrity.

This explanation of the degeneracy and of the improvement of man's moral and intellectual forces, of the origin of his vicious and virtuous propensities, of genius, and of weakness of intellect, is most in conformity with his nature.

It is now time to meet the great question, namely, as man cannot, in any manner, arrest the development of his organs, nor, consequently, relax the energy of their functions and cause himself to be urged either more or less imperiously to do good or evil, are his actions, also, submitted to the same fatality? Does he do good or ill by irresistible impulses? or does his organization permit him a voluntary determination? Are actions evidence of merit or demerit?

It is important, that I should put this subject in the clearest light; and as there result from it the most important practical consequences, I shall treat it with peculiar attention and perfect frankness. May my readers bring to the examination the same love of truth, which will guide me in the whole of this great discussion!

Free Will.

Free will has always been the stumbling-block of most of the philosophers. A great number have succeeded, by force of reasoning, in proving that all which happens, happens necessarily; and as all actions are the necessary consequence of preceding ones, in the same manner as an effect is the necessary consequence of a cause, they have concluded from this necessity, from this relation between cause and effect, that there can be no voluntary act, and have, therefore, denied all liberty. Others, on the contrary, have made a romance of the nature of man, and, comparing him to the Deity, have assigned to him liberty without bounds. Others, again, think, that they see freedom, where there exists in fact nothing but its image. A few only have regarded free will in its true and correct point of view.

Whether we allow too much or too little liberty to man, we shall always do wrong to morality; and the judgments we form on our own actions, and those of others, will even lead to error. It is, therefore, important to clear up this obscurity, and to determine, to what extent a man in possession of his faculties, enjoys the power of choosing between such and such an action.

Unlimited Liberty.

There are not wanting philosophers, who, seeing in man the image of the Deity, make him almost as free as God himself. They give him unlimited liberty; but unlimited liberty would imply, that man created his own nature; that he is himself the author of his desires and faculties; that he governs himself independently of all law. As man has not unlimited power over his birth, nor over the duration of his existence, nor over his sex, nor his temperament, nor the influence of external things, such a liberty is completely in contradiction to his nature. All that can be said in favor of this boastful opinion reduces itself to emphatic declamations, void of sense and truth.

Absolute Liberty.

Other persons think it proper to admit at least an absolute liberty, by virtue of which a man may act without motive, internal or external. But, as there is no effect without a cause, as one thing is always the cause of another, and as nothing in nature can happen except in accordance with determinate laws, it follows that every phenomenon, such as that of an absolute liberty which might take effect without cause, is absolutely impossible. If man could act without motive, and solely from caprice, there would be no certainty, nor even probability, that, under given circumstances, he would act in such or such a manner. Sex, temperament, and organization more or less perfect, the education received, habits, principles, laws, morality, religion, circumstances, natural propensities and faculties, fortuitous excitements, nothing, in fact, would enable us to divine, with any probability, on what an individual, so constituted, would determine. For the rest, this liberty would be a faculty in contradiction with itself, since it would make a man act reasonably or unreasonably, justly, or unjustly; finally, well or ill, but always without motive. Why should we expect of a man in such case, friendship and fidelity rather than hatred and perfidy; virtue rather than vice? All institutions which have for their object the welfare of individuals and society, would be useless. Of what use would be education, the culture of the mind and heart, morality, contracts, promises, oaths, religion, punishments, rewards, when nothing for such a man would be a determining motive? In this hypothesis, man alone would form an exception to the general laws, by virtue of which each phenomenon has its cause; and the ideas, the sensations, the propensities, thoughts and actions of man would not be determined by previous causes in the manner every event without him would be regulated. Such liberty, then, is an absurd chimera.

M. Ancillon,* in maintaining the doctrine of absolute liberty, says—"The dignity of human nature is founded entirely on moral liberty: moral liberty is the power of obeying the law under all circumstances, the power of commencing a series of actions in spite of all the causes and all the motives, which would seem to involve, necessarily, a different series. To present actions in their relation with liberty, is to start with the principle that the actions of man belong to himself always, and that he is always at liberty to omit or to do them. When we are satisfied in history with simply explaining actions, we degrade man; he becomes a passive instrument, an integrant part of nature, and freedom disappears. We cease to take into account the power, which the man had of doing otherwise than he has done, and it follows that this was the only course left for him."

---

* Melange de lit. et de philo. tom. 1. p. 245.

Thus, according to this author, man, as man, is an entirely insulated being, who has nothing in common with the rest of nature. On the one hand, M. Ancillon, abandoning himself to vain reveries on the noble nature of man, thinks[*] that always, and under all circumstances, he has the power to withdraw himself from the influence of all causes, of all motives, and of entire nature: liberty, according to him, is the only force which submits to no law, to no cause, and which has its support within itself.[†] On the other hand, he confesses that nature exercises a great control over man, that the laws of nature tend, without ceasing, to encroach upon those of liberty,[‡] and that the power which nature has over man, explains his actions.[§] By adopting the true view of a subject, one does not fall into such contradictions. Kant,[‖] therefore, and Feurbach,[¶] have reason to say that absolute liberty has nothing real, and is only speculative. That I may avoid difficulties arising from too much obscurity, I shall not enter into the discussion of the question—how actions can be necessary, and nevertheless voluntary and free.

In maintaining that man has only to will, in order to be capable of every thing, philosophers endeavor to establish a principle in conformity with good morals. But, can a principle which is belied at each step we make in nature, and in the study of man, be a principle of good morals? A principle, which always tends to make us forget the motives, the true sources of our actions, and which, by that circumstance, deprives us of the means of directing them; a principle, which makes an independent will, or rather a caprice, the author of our good and evil actions, and which consequently destroys all the equality of our judgments on the actions of others, all justice in criminal legislation, all tolerance, all charity: such a principle is certainly not a principle of good morals.

---

[*] L. c. tom. 1. p. 245. [†] L. c. tom. 2. p. 224. [‡] L. c. tom. 2. p. 227.

[§] L. c. tom. 1. p. 245. [‖] Metaphysische Anfangsgrinde.

[¶] Revision der Grundsatze und grundbegriffe der positiven Rechts, Jena, 1799.

Of Illusory Liberty.

To those who deny free will, is commonly opposed the internal sense of individual freedom. It is said that every one has a consciousness, that so long as no constraint, physical or moral, forces us to act, we act freely,—that is, that we might have acted in a different manner. But, as the adversaries of free will, prove that this feeling, this internal consciousness, is only an illusion, it would be better, for the good cause, to abandon this argument.

In fact, even when acting under the influence of desires more or less imperious, without choice, without will, man experiences a sense of satisfaction which connects itself with the accomplishment of his desires and which is the more lively, in proportion as these desires were the more urgent. It is this satisfaction which misleads the individual, and makes him imagine that in this case he acts with freedom. Thus, he thinks he acts with freedom when he walks erect, although his organization obliges him to do so: the man agitated by jealousy and the desire of revenge, and he whom the fire of love is consuming, regard themselves as free, so long as their desire and its accomplishment cause them to feel satisfaction. When the storm is hushed, they change their tone and acknowledge, that they were carried away by the impulse of passion. We are often entire strangers to every idea of sensual appetite; but hardly does an object excite our organs, when immediately we experience the desire of possessing what we should have disdained an instant before, and yet we believe, that we have determined with freedom. Animals do not enjoy real liberty; yet they act without feeling any restraint. Like men, they experience the pleasure which follows the accomplishment of their desires. Can we say that the sheep and tiger are free, because the one browses on the grass, and the other tears his prey with a feeling of satisfaction?

It is because men have confounded this internal feeling with true liberty, that they have thought to oppose to it the following reflections:

"A ball," says Hommel, "placed on a board, allows itself to be moved forward and backward, to the right and left. If the board is at rest and horizontal, the ball remains motionless. If this ball had consciousness of its motion and not of the cause, it would believe that it moved voluntarily." Leibnitz compares liberty to a magnetic needle, which should have pleasure in pointing to the north. "In this case," says he, "it would imagine that it moved freely and independently of any other cause; for it would not perceive the subtle movements of the magnetic fluid."

In a variety of circumstances, even our judgments are accompanied with a pleasurable sensation, without being, in consequence, the results of our reflection. Hence it is that we judge the same object differently, according as from one instant to another, what has passed within or without us, has produced some change in our internal feelings. In this sense, M. Lamark* is right in saying, "that the diversity of our judgments is so remarkable, that it often happens, that the consideration of the same object gives rise to as many particular judgments as there are persons who undertake to pronounce on the object; and this variety has been taken for freedom in judgment, but erroneously; for, it is simply the result of the different elements, which in different individuals enter into the judgment thus formed."

---

* Zool. philo. tom. 2. p. 343.

It is in the same sense that we must interpret the following passage of M. Feurbach. "The faculty," says he, "of being determined by the ideas to realize an object, or, to act, is accompanied with the consciousness of an independent activity, of absolute *free will.* When of two possible opposite determinations we decide for one or the other, when we reject the one and desire the other, we believe, in accordance with what immediate consciousness teaches us, that the cause of this choice resides entirely in us; that the faculty of desiring is the principle of desire, and that, under the same conditions, it might as well have determined for one thing as for another. Although we thus appear, in this case, not as determined, but as determining, this feeling does not secure to us our freedom; and we cannot regard it as a proof of our independence of natural causes, without exposing ourselves to the well-founded objections of the *determinists*, and contradicting the natural law of the constant connection of causes and effects. This internal feeling may be an illusion. We have this feeling of liberty, solely because we do not discover the secret threads which connect causes with effects, and which draw us toward such or such an object."

It will be seen, then, that these passages are directed against those, who would prove free choice by this internal consciousness, by this illusory feeling of liberty, founded solely on contentment, on the satisfaction of the desires.

What, then, in fine, is the kind of liberty which we must admit for man, as a being endowed with inclinations, sentiments, talents; in a word, with moral qualities and intellectual faculties?

Moral Liberty.

We cannot, and we ought not, admit any other liberty than that which is in accordance with the general laws of nature and with the nature of man. We have seen that an unlimited liberty and an absolute liberty are in contradiction with the nature of a being created and dependent. The liberty which we ought to acknowledge, must consider man as a being subject to the laws of causes and effects: this liberty must render the individual and the lawgivers responsible for good and evil: in this liberty our acts must have the quality of merit and demerit: the development of this liberty must convey the full conviction, that it depends not only on the organization, but also on the influence of external things, whether man is more or less master of his actions; and that social institutions, education, morality, religion, laws, punishments and rewards, are eminently useful and indispensable. A liberty, which has all these characteristics, is a moral liberty.

Moral liberty is the faculty of being determined and of determining one's self by motives; or, in other words, liberty is the power of willing, or not willing, after deliberation.

It is this liberty, which has been the subject of the lessons of the ancient philosophers and lawyers, the only liberty, the application of which to social life and to each individual, can have the most extended influence. The moral code and the religion of all nations themselves, suppose only this species of liberty; since their only object is to furnish to us the most powerful and the noblest motives to direct our actions.

There are, then, two principal points to consider in moral liberty; the faculty of being determined, and the faculty of determining one's self by motives.

To make these two points clear, it is first necessary to remove a difficulty which results from my two propositions already proved, that all our dispositions, propensities, and talents are innate, and that their manifestation depends on the organization. It may be asked, to what extent moral liberty can reconcile itself with these two truths? "Man," it is said, "can in no wise change what is innate; no more can he change his organization. He must, consequently, act as the innate faculties and qualities, and their organs permit, or rather command him."

It is true that man cannot change his organization, nor the results which follow directly from it. Moreover, he has no control over accidental impressions produced from without. Thus, when by the effect of his organization, or of external stimuli, there arise in him sensations, propensities, feelings, ideas, wishes, we must consider him, as respects these impressions, desires, and thoughts, as the slave of his own organization and the external world.

Each organ, when put in action, gives him a sensation, a propensity, a succession of ideas, and, in this respect, he has no empire over himself, except so far as he might prevent or produce the action of the organs. As it is impossible for him not to feel hunger when his stomach acts in a certain manner, so it is impossible for him not to feel the desires of the flesh, or any other propensity whatever, for good or for evil, when the organs of these propensities are in a state of excitement. It would, therefore, be unjust to render man responsible for the existence of these sensations and desires, and for him to make of them a personal merit or demerit.

But we must be cautious; for it is a great mistake to confound *propensities* and *desires* with *will.* To will, is nothing less than to feel desires, as M. Richerand [*] quotes with approbation from M. de Tracy, [†] or as Fichté says, the simple tendency of the faculties to act; and desire is nothing less than a movement of the will towards a good which one does not possess, as it is defined in the *Dictionary of the French Academy.*

The ancients spoke of desires, concupiscences, volitions, or inclinations, and distinguished them carefully from will. Kant has with reason followed them, and Condillac [‡] says, on this subject, with much justice, "As it does not depend on us, not to have the wants which are the result of our conformation, it no more depends on us not to be inclined to do that to which we are determined by these wants."

---

[*] 7th ed. tom. ii. p. 189.

[†] Ideologiè, p. 69.

[‡] Œuvres compl. tom. iii. p. 26.

It is then, also, from having confounded these various affections, desires, concupiscences, inclinations, with true will, that men have found inextricable difficulties relative to moral liberty. There is reason to deny freedom, as respects the existence of the desire; but it is a false inference, to conclude that the will and the acts are equally wanting in freedom. The desires, the propensities, are the result of the action of a single organ, as I have shown in treating of the origin of moral qualities and intellectual faculties. Will, on the contrary, is a decision, a determination, produced by the examination and comparison of several motives.

Let us examine how man becomes capable of will, and, consequently, of moral liberty; how man can be in opposition with his desires; and how this same will, this same freedom, acquires, in different individuals, a different extent.

Let us represent to ourselves a being, endowed with a single organ. This being could perceive only a single species of sensations or ideas, and would be capable of exercising only a single species of faculties. Such a single organ might well be put in action by internal and external irritations, and be exercised in this action by frequent repetitions. But this individual would not be susceptible of any other sensation or idea. It would be impossible for him to compare sensations and ideas of different kinds, and to choose between them. Consequently, as soon as the single organ should be put in action, there would be no reason why the animal should not follow the propensity put in motion, or the idea awakened by this action; he would, therefore, be under absolute restraint; or, rather, he would have no possibility to do otherwise than submit himself to this motive, to this single impulse. The inaction or action of this being, would result simply from the activity or inactivity of this single faculty. It is thus that the inferior animals are invariably limited to their aptitudes or their instincts.

As soon as animals are endowed with several organs, as happens especially in the more perfect orders, they also become susceptible of different species of sensations and ideas. It is true that, in this case, the action of one organ destroys neither the existence nor the action of another; consequently, it can no more destroy the sensations and ideas excited by this organ. But an organ may act with more energy, and furnish a more powerful motive. The instant you have presented food to a hungry dog, and when he is on the point of devouring it, make a hare pass before him, and he will run after the hare, though he has not ceased to feel the sensation of hunger. If you repeatedly employ violence to prevent the dog from pursuing the hare, he remembers the blows which await him, and, though the ardor of his desire occasions him tremors and palpitations, he will no more trust himself in the pursuit. If the dog were only susceptible of hunger, or if he had propensity and faculty only for the chase, this mode of action would be impossible to him. It is, then, the plurality of organs which renders him susceptible of different ideas and sensations. But, as these ideas and these motives are not of a high order, we cannot call this faculty in animals, a moral freedom, a real faculty of willing; we must regard it as simple *spontaneity*, or the faculty of being determined by the strongest and most numerous excitements.

Now let us compare man to the most perfect animals. How are the motives, of which his more elevated organization has made him susceptible, ennobled and multiplied? Beside the propensities and the faculties which he has in common with animals, he distinguishes truth from error, justice from injustice; he compares the present with the past, and reads the future; he seeks and discovers the connection of causes and effects; he has the sense of shame and decency; he has sympathy and compassion, and can, of himself, discover the duties which he owes to others; he is furnished with internal organs for morality and religion, for knowing and honoring an eternal and independent Being. His internal organization, his language, tradition, education, &c., secure to him an abundant source of knowledge, and furnish him an infinitely larger number of motives than animals can have. By means of his reason, he compares ideas and sensations, weighs their respective value, and can especially fix his attention on determinate motives. From all these operations, finally, results decision. It is this decision, the result of reason, and of the comparison of motives, which is properly willing, and the act of willing, in opposition to the propensities, desires, volitions, the inclinations, and the simple sensation of contentment.

It is now easy to conceive, how man may have desires and inclinations altogether different from his will, and how his reason places him in opposition to his desires. The senses are inflamed, and man feels himself incited to obey this movement; but if he abandons himself to his desire of vengeance, he knows, by means of his intellectual faculties, that a base action will dishonor him, and that he will be rather regarded as the slave of his passions than as master of himself; if he throws himself into the arms of voluptuousness, the frightful image of his health destroyed, and his domestic felicity overthrown, presents itself to his eyes; the regulations of social life, the shame of abusing confidence, the disastrous results of his conduct as affecting the beloved object, &c. &c.; all these motives act in his mind, and by their force or their number succeed in overcoming him. It is thus that a man comes to will a thing precisely the reverse of that to which his desires would have led him.

Each one, then, ought to feel that, so long as the propensities and the desires are not awakened and nourished by the participation of the individual, he cannot be made responsible for them; but that he is so for his determination, for his will and actions.* Thus it is, and always will be true, that the organs of the moral faculties given by the Creator, are the principle of what we call sometimes propensity, sometimes inclination, desire or passion, according to the different energy of action of these organs. Every one allows that, in this respect, the empire of man is limited; it is not in his power to annihilate his propensities, nor to give himself inclinations at will. But, in the midst of the most earnest desires of man, if several faculties of a superior order, the exercise of which is maintained by a perfect organization, act in him, and join themselves to the external motives which education, the laws, religion, &c., furnish him, these same desires are overcome. The will which man then manifests, is no longer the action of a single organ.

It is the business of the man, secured within and without by multiplied motives, and endowed with the faculty of comparing them, to weigh them, and to be determined, or to determine himself, according to these motives. Now it is incontestable, that, so long as man enjoys his good sense, he can act thus, and that he often wills and does the entire contrary of what his propensities direct him; consequently, he is morally free. It is this liberty which makes of man a moral being, which gives to his actions morality and responsibility.

But, let us not believe, that this faculty of willing or not willing, this moral liberty, has been given up to chance by the Creator.

The determination which takes place by motives, is also submitted to laws in such a manner that, in the exercise of moral liberty, there can never be any question as to unlimited or absolute liberty. The laws of nature, for instance, ordain that the faculties of an inferior order should obey those of a superior order; that every living creature should love himself, and, consequently, employ all his means and his faculties for his own happiness. "All men," says Pascal, "desire to be happy. This is so without exception. The will makes no effort except toward this object. It is the motive of all the actions of all men, even of those who destroy themselves." Man must, then, necessarily desire a good, and dread an evil, which he acknowledges as such. If several motives present themselves, it is not in the power of the man to decide indifferently for one or the other; but he is determined, according to the laws of thought, by the motive which acts most powerfully upon him, or offers him the greatest good.[†] Without this necessity, man, with all his moral liberty, would fall into that unreasonable contradiction against the laws of nature, of which I have made mention in speaking of unlimited and absolute liberty.

---

* Nec tardum ingenium, nec labilis memoria, nec inquietus appetitus, nec sensus obtusus, nec vita languens reum per se statuerunt hominem, sicut nec contraria innocentem, et hoc non ob aliud, nisi quia et hæc necessario et præter voluntatem posse prævenire probatur. (S. Augustinus, de liber. arbit.)

Meanwhile, this liberty, conformable to the dependence in which we are placed in the creation, to the laws of nature and of our organization, fulfils all the conditions which we can expect from a finite, but reasonable being. It not only renders those who direct man, responsible, but makes each individual so, for his actions; it is the only liberty which can be useful in life, and, as Locke[‡] says, the only one which is supposed in human institutions; while, in admitting an unlimited or absolute liberty, all the efforts which tend to guide man, would be absurd.

When certain philosophers require, that we should practise virtue and justice, without any motive, for the sake of virtue only, far from doing away with the ne-

---

[*] Pensées sur la religion, p. 162.

[†] Quelles facultés sentez-vous en vous-même? R. Deux facultés principales: la faculté de connaitre et la faculté de vouloir, ou de me porter *a ce quil me plait.* (*Catechisme à l' usage de toutes les eglises de l' Empire Francais.* p. 22.)

[‡] L. c. tom. iii. p. 454.

cessity of motives, they present to you virtue and justice as the most sublime motives, and the most worthy to lead you to act. Every thing, then, proves, that in all states of human society, men have supposed no other freedom than that of being able to be determined, or to determine one's self, by the most powerful motives.

It is certain, that all individuals do not enjoy moral freedom to the same extent. How happens this?

We have seen that the faculty of appreciating motives of a superior order, constitutes the first condition of moral freedom. Now, all motives are founded either in our own constitution, on a happy organization, or on external circumstances. As our internal faculties are more limited, the fewer motives will they furnish us to do good, or to avoid evil; and the more the noble sentiments and faculties predominate over the propensities, the more will these be counterbalanced, when their tendency becomes prejudicial. Thus, the man with great talents has more liberty than the ordinary man; and the more the faculties descend towards idiocy, the more, also, moral liberty goes on decreasing.

The second source of our motives is in external circumstances. The man who has fewest wants, will also be less tempted than the man who is sunk in misery. The man formed and cultivated by education, morality, and religion, and who understands the laws and the duties of society, will have infinitely more motives in his power than he whose heart and mind have been abandoned to ignorance and brutality. In general, the greater disproportion there is between the motives, whether internal or external, and the energy of the propensities, the more precarious becomes the exercise of moral liberty.

Are our Actions uncontrollable by reason of our Propensities and our Faculties being innate?

What I have now said on moral liberty, proves how far I am from maintaining the uncontrollable character of our actions. It is not because those who accuse me of this absurdity, do not understand my principles; neither will I say that it is through ignorance, or through piety, that they have assumed so bitterly the character of censors of my doctrine. No; let us leave it to posterity to do justice to their motives and intentions, and let us pursue our own task of rectifying erroneous ideas.

Professor Ackermann of Heidelburg, whom my adversaries in Germany have adopted as their leader, and whom my adversaries in France have faithfully copied, has directed himself with a suspicious animosity against the innateness of the moral qualities and intellectual faculties. If these dispositions are innate, said he, we have done with moral liberty; our actions are inevitable, and malefactors of all kinds have gained their cause.* Observe to what means he has recourse to prove this consequence.

Objection.

"*An organ is the real representation of the faculty itself.* The organ being given, its action is so likewise. A muscle which contracts is a different muscle from one which is extended. This is the true definition of an organ; but it cannot be adapted to the trash of Dr. Gall, since he would be obliged to say, that the organs being given, their peculiar action is so likewise, which annihilates the liberty of man."

---

* Compare with this passage, the remark of M. Moreau, de la Sarthe: Exposition of the system of Dr. Gall, extracted from the *Decade Philosophique*, etc. and the *Journal de l' Empire;* many passages in the *Dictionnaire des Sciences Medicales;* Tupper on Inquiry into Dr. Gall's System, etc.

Reply.

All the objections of Ackermann turn upon the same false definition of *organ*, and I should be almost ashamed to regard them as worthy of the least attention, if they had not found so many partisans.

If the organ and the manifestation of its functions are the same thing, the organ cannot exist, unless its function takes place, and the agent must disappear every time the function ceases; consequences which Professor Ackermann himself derives immediately from his definition. Thus, not to lose an organ, we must keep them all in eternal activity, together; we must always, and at the same time, taste, smell, hear, look, touch, run, sing, dance, speak, eat, think, learn by heart, judge, will, &c. In sleep, all the organs of animal life would disappear. Who does not see the absurdity of Ackermann's definition, and, consequently, the absurdity of his whole argument?

I call an organ, the material condition which renders possible the exercise or the manifestation of a faculty. According to this definition, it may be conceived that no exercise of a faculty is possible without an organ, but that the organ may exist without the faculty to which it belongs, being put in exercise.

Professor Ackermann will have it, that men cannot refrain from doing things, for which they have received material conditions or organs. He does not perceive that he contradicts himself. According to him, the cochlea of the ear is the organ of music;[*] according to him, too, the *thalami nervorum opticorum*, (couches optiques,) and well-organized senses are the organs of the imitative arts;[†] he likewise maintains that the organ of painting is a practised eye.[‡] Now, if it be true, that no organ can exist without action and exercise, it follows that every man and every animal which has the cochlea in the ear, must perform or compose music; that every man and every animal possessing the *thalami*, and senses well organized, must be skilful in the imitative arts, and that every man and every animal having a practised eye, must constantly be engaged in painting. I shall not remark how singular it is, to hear it said, that we can *acquire* an organ, to those who pretend to understand thoroughly the true principles of the physical organization.

---

[*] L. c. § 157.

[†] L. c. § 160.

[‡] L. c. § 156.

Objection.

§ 77. "When the organ becomes atrophous, the faculty or the aptitude which has existed by this organ, immediately ceases. This, experience teaches us. A musician of the greatest powers, if he does not cultivate music, loses the faculty of perceiving and producing tones; the painter loses his talent when he no longer exercises it. This is what will hold true of all the organs of the animal body. The muscles of an individual, obliged by disease to remain a long time stretched on the bed, become atrophous, and the faculty of motion diminishes in the same proportion. The eye becomes atrophous in the darkness of the prison, and the faculty of seeing is proportionally diminished. What need we more to prove, that without a manifestation of the faculty, no new organ is produced or exists, and that the diminution and cessation of activity, involve the wasting and gradual disappearance of the organ?"

Answer.

I have several times repeated my confession of faith; it is, that the want of exercise may retard the activity and the development of an organ. It is on this that I found the advice to control as much as possible, in children, the exercise of organs which may become dangerous; to prevent, by this means, the facility of action which would be the consequence, and to favor, on the contrary, the action of organs whose tendency is advantageous; but I have never inferred from this, that without some manifestation of the faculty, any organ can be produced or can exist. Men and animals bring with them, in coming into the world, all the organs of the functions of the senses, and even the internal organs which Ackermann supposes, such as the organ of will, of comparison, of abstraction. It would be difficult for him to call in question that we are born with eyes and their nerves, with the tongue, nose, ears, hands, and with the nerves of all these parts, with the great cerebral ganglion, heretofore called the thalami; in fine, with the two hemispheres of the brain. These parts, therefore, exist and are born previous to all exercise, before any manifestation of faculty; and though so many animals remain deaf and blind for several days, and new-born infants can neither compare nor abstract, yet all their parts tend, by degrees, to their perfection, and become successively capable of exercising their functions. For the rest, one hardly knows how to answer the metaphysics of Professor Ackermann. It would follow, by taking his opinions literally, that the atrophy of organs is impossible; for if it be true, as he often repeats, that the existence of the organ coincides necessarily with the manifestation of the faculty, it ought to result that the organs, so long as they are not violently destroyed by death, are continually exercised, and thus preserve their existence and integrity.

Objection.

§ 78. " The beautiful hypothesis by which Dr. Gall, in the exposition of his doctrine, thinks to secure the freedom of man, falls of itself; for, as soon as he shows an organ of theft, the being in whom he observes it, must be a robber; and not only has an assassin the organ of murder, but whosoever has on his cranium the organ of murder, must be an assassin. If he says that one may have the organ of murder without being an assassin, I deny this proposition, because no organ can exist without its faculty being manifested; if he objects that the manifestation of the faculty may be arrested by other organs, and other actions, I say that in this case the organ ought also to waste, and that, consequently, the organ of murder should be wanting in him who in fact is no assassin."

§ 79. "It must be confessed that the idea of admitting organs without the presence of the faculties which they ought to represent, is an excellent subterfuge, to escape and to answer all the reproaches and all the objections which can be made to organology. For, if any one whose skull is examined, has the organ of theft, and yet is not a robber, it will be said that the organ only indicates the disposition, and that the man, in not robbing, proves that he has had a good education, which has given him the means of resisting a violent propensity. If an arrant knave has not the organ of theft, the difficulty will be got rid of by showing, that respect for another's property has been somewhat set aside by the preponderating action of the other organs, but that one cannot impute this act to the organ of theft, which is entirely wanting."

§ 80. "Dr. Gall has a vast field open before him; he may traverse it with short-sighted people, and set aside their objections with extreme facility. But he is overpowered in presence of the true observer of nature, whom he resembles only by his mask. He must of necessity confess that, if there were organs such as he imagines, these organs could not exist without a manifestation of the faculties; and that whoever has the organ of murder must be an assassin, in the same way as whoever never has committed murder, cannot have this organ. He must confess, that such a doctrine, if it could subsist, annihilates the freedom of man, and that then human society could only be governed by the laws of a blind necessity, and not by those of reason. But, fortunately, Dr. Gall's doctrine of organs is worth no more than his logic and his observations of nature taken in a mass. It is evident, that there are not, and cannot be any organs like those, which Dr. Gall has invented."

Answer.

I have combined these three paragraphs, in order to comprehend them in a single answer. Why do my adversaries, when they pretend that I teach the uncontrollable character of actions, always speak of the propensity to theft and the propensity to murder? They know, in the first place, that by the expression, propensity to murder, I by no means design an organ which leads immediately to homicide, but simply the natural propensity to killing other animals, a propensity which belongs to every carnivorous animal, and, consequently, to man; they know that it is only the degeneration and abuse of this propensity which lead to homicide; they know, also, that we admit organs of goodness, as well as moral and religious sentiments; why, then, do they not say that men are irresistibly led to commit good, moral, and religious acts?

Professor Ackermann cannot admit what I have always publicly professed, and what I have now established in this treatise, on the free use of innate qualities, because, then his objections would reduce themselves to nothing. I am, therefore, going to prove to him, by arguments drawn from his own principles of physiology, the truth of what I have advanced above. Though the will has no immediate influence on the vegetable or automatic life, or on the organs of this life, such as the heart, liver, kidneys, still Professor Ackermann acknowledges, with all physiologists, that animal life, and the action of its organs in a state of health, are almost entirely subject to the will. Now, as he establishes the principle, that there exists an organ of will in the brain, it would result from his own avowal, not only that all the actions of animal life ought to take place necessarily and always, but also, that by a singular contradiction, will and irresistibility would exist together!

As Professor Ackermann always continues to repeat these same objections, I am obliged to hold to the same answers. All his arguments have no other basis than this false definition: *the organ is the true representative of the faculty*. If the organ and the manifestation of its faculty were the same thing, and their co-existence were necessary, all the organs of animals and of man, those of automatic as well as those of animal life, would have to be continually and simultaneously in action, or an instant of cessation of the action would cause them to disappear. Where do we see any example of this in nature? Does a muscle disappear because it is inactive? Ackermann answers, that a muscle in motion is quite another muscle from that at rest. It would result from this reasoning that the same foot, according as it walks or remains immoveable, would be quite a different foot.

Let us again reason on the other avowals which Ackermann makes. He admits the brain as the organ of the soul in general: he establishes, besides this, some peculiar organs in the brain, for comparison, judgment and will; he regards the combination of solid and liquid parts, the nervous plexuses and the ganglions of the chest and abdomen, as being the organs of the affections and passions. Now, if the objections which he makes to me had any foundation, would not these objections be common to his system with mine? Would it not follow, from his own confessions, that man ought without ceasing to compare and judge, to wish, without cessation, good and evil, truth and falsehood; to be unceasingly a prey to all affections, and to all passions; and that, when in sleep, in fainting, in apparent death, these organs cease to act, all should immediately disappear?

The idea which Ackermann conceives of an organ, is so contrary to good sense, that he has not been able to keep himself invariably to the same language. He says expressly, in parag. 77: "The organ and the manifestation of the faculty belonging to it, are the same thing; without exercise, no organ can exist, or be produced: the cessation of action of an organ involves its diminution, and, finally, its disappearance." He also says, in parag. 78, that no organ can exist without manifesting its faculty; that the man who has the organ of murder, must be a murderer, as he who has never killed cannot have this organ. Now, what I am going to cite, is in direct contradiction with what precedes. Professor Ackermann says, in parag. 73: "The manifestation of the faculties depends solely, or in a great degree, on perfectly developed organs: when the manifestation of the faculties does not take place for a long time, the organs or the dispositions must successively diminish, and, in fine, disappear altogether." He admits, then, here, that the birth of organs, their existence, and their perfection, are anterior to the manifestation of their faculties. He does not, then, regard the organ and the manifestation of the faculty as being the same thing. It is no longer on single organs that he makes the faculties to depend—he makes them thus dependent only in a great degree; and in order that the action may be effected, he admits, likewise, other conditions. In fine, he confesses that the organs diminish gradually, only when they have been a long time inactive.

Ackermann does not content himself with confounding, every moment, the total disappearance of organs with this diminution; he also regards simple alterations and maladies of organs, such as hardening, and paralysis, as being the same thing with the complete annihilation of an organ, and takes the effect for the cause; for, in these cases the cessation of the functions is a consequence, and not the cause of the malady.

In fine, all the statements given by Ackermann are false. Without exercise, says he, no organ could exist or be produced; although just before, he had said, that they are produced and exist a long time without exercise. Are not all animals and all children born with several organs and senses, though they may not have been able to exercise them in the womb of the mother. ? At all periods of life, the organs are perfected before they can fulfil their functions or be exercised. They exist, then, very well, without any exercise, and without fulfilling any of the functions which are proper to them. The muscles of the external ear are found in almost all men; but since the creation, there have been but a small number of individuals, in whom they have been exercised. It is commonly by chance, and after having lived thirty or forty years, without using this faculty, that one finds that he can move the muscles of the external ear, or the skin of the top of the head. Thus, there is nothing but error and contradiction in all the objections of Professor Ackermann and his partizans, M. Moreau de la Sarthe, M. Tupper, &c.

M. Kurt Sprengel, eminent for the services which he has rendered to science, has addressed some objections to us on the irresistibility of actions.* I sincerely wish, for the honor of German literature, that so distinguished a scholar had not spoken of my doctrine, till after he had been led to understand its spirit and purport, otherwise than by rumors. That has naturally happened to M. Sprengel, which happens to every learned man, who wishes to attack a doctrine before understanding it in its whole extent. Even while urging the consequences which he thinks must flow from this doctrine, he cannot refrain from rendering homage to the truths which form its basis.

M. Sprengel makes the faculties of the soul and mind depend in part on the brain, in part on the temperament. He extols the advantages of the mind, when it inhabits a healthy body. He acknowledges, as we all do, that health is necessary, in order that the functions of the mind may be duly performed. Too great irritability,[*] he says, has for its consequences erroneous judgments, an ardent imagination, a faithful memory, a refining spirit, irresolution, inconstancy, profound sadness, and inordinate gaiety. The voluptuous character of the fair sex depends on the delicacy of their physical constitution: the soft temperament produces a feeble but sure memory, an indolent conception for love and hatred; a dry temperament gives, on the contrary, many errors, a durable memory, attention to a single object, an imagination often overflowing, and very lively affections of the soul.

---

* Institut. Med. Amst. 4810. T. ii. § 368. (A Paris chez. F. Schoell.)

This last and ancient error has maintained itself till now, among all the physiologists: all continue to speak of the different qualities of the mind and soul which must result from such or such a temperament. The most recent physiologists have no scruples in advancing that the man endowed with a sanguine temperament may, in vain, wish to renounce the pleasures of the senses, to have fixed and durable tastes, to obtain by profound meditation the most abstract truths: controlled by his physical propensities, he will incessantly be brought back to the pleasures he avoids, and the inconstancy to which he is destined.

These assertions are repeated from one age to another, without ever asking or examining whether they are proved by constant experience. What is certain, is, that this doctrine establishes at once the innateness of the faculties of the soul and mind, and the dependence of their exercise on material conditions. Whether these conditions all reside in the brain, or whether they are dispersed through the whole body, in the viscera, in the nervous plexuses, in the blood, or in a nervous fluid,—they are, nevertheless, material conditions, which hold the manifestation of the moral qualities and intellectual faculties in their dependence.

---

[*] L. c. p. 276.

Yet, though M. Sprengel regards the properties of the soul and mind, as consequences of the harmony of the solids, and the combination of the fluids, he nevertheless accords to man a free will, and says expressly, that one need only blame himself, if he be led away by his temperament.* Why, then, not be satisfied with my asserting also, that man has only himself to blame if he follows the impulse of his organs; and that I believe with St. Augustin, that God, in giving the power, does not impose any necessity?†

I have proved, that it is only by admitting different organs for the different qualities and faculties, that we conceive how an organ can excite to certain actions, while other organs produce movements and ideas precisely opposite; and that we thus comprehend how man, when evil propensities are stirring within him, can either within himself or without, find opposite motives, and adopt a contrary resolution. But where shall man find opposite motives within him? how shall he be capable of receiving those which come from without, if the principle of his propensities, his desires, his faculties, in fine, of all his sensations and thoughts, resides in a single organ, or in the whole body? When the blood cries for vengeance, what integrant part of the temperament shall give to man, tranquillity, or the power of vanquishing himself? We may, then, affirm, that moral liberty can only exist on the supposition of a plurality of organs.

There is, again, a new difficulty, of which German authors have spoken. From observations which I have made in the prisons, it results, that I have determined in the prisoners, not only the dispositions of the soul and mind, but also the actions of these same prisoners. Might not one be tempted to conclude, that I regard the actions for which our organization gives us a propensity, as inevitable?

---

* L. c. § 375.

† Lib. de Lit. et Spiritu. ch. 31.

It is a scriptural as well as a philosophical doctrine, that man possesses no power of his own creation; that he is dependent for all power upon the Deity. If man received from the Deity only the power to act, and not the power to *will*, the power of divine origin is made subservient to the human power. Infinite wisdom and power are absolute causes; and we can as readily conceive of an effect without a cause, as we can understand a cause as not necessarily producing its legitimate effect. [Ed.

My reply to this question can only be completed by discussions, which will find their place in the following volumes. I limit myself, at this moment, to the general explanation of some of my principles. It will suffice to make my procedure in this respect intelligible, and to set aside any false interpretation. The different primitive faculties of the soul belong to different parts of the brain, in the same manner as the various functions of the senses are attached to different nervous systems. The functions of the senses, whose organs are more considerable, more sound and more developed, or which have received a stronger irritation, are, for that reason, more lively. The same phenomenon is produced in the faculties of the soul; the organs of these faculties act with more energy, if they are more excited, or more developed. On the other hand, there are several organs whose greater development shows itself in convolutions, thicker and more enlarged and prolonged on the surface of the brain; and these convolutions are, in their turn, represented by elevations on the external surface of the cranium.

If to this be added, what I shall demonstrate for each organ in particular, namely, that I have found means to determine, that such or such part of the brain, is the organ of such or such a faculty of the soul, it will then be understood, how, from a considerable and determinate elevation of the cranium, it has been found possible to infer a greater development of a portion of the brain, and, consequently, the greater energy of a determinate faculty.

If, in social life, I perceive in any one the external sign of a well-developed organ, I can say with confidence that, in this man, the disposition of the faculty which belongs to this organ is stronger than the dispositions of his other qualities. But, I am ignorant whether circumstances have permitted this individual to devote himself to the pursuit to which this principal disposition would direct him. Birth, condition, education, laws, customs, and religion, have the greatest influence on the occupation, exercise, and perfection of the organs, as well as on the moral character of the man: it would be rash, therefore, to conclude, that the actions of an individual correspond to the faculty, to which we remark a predominant disposition. On seeing the organ of tones, or that of the mechanic arts, very much developed, we may affirm that the individual has a great disposition or talent for music, or for the mechanic arts; that in his youth, he must have had more success in these arts, than his comrades; and that, probably, next to the duties of his calling, he makes these his favorite occupation; but I cannot say that he is actually a musician, or a mechanic. If the question concerns propensities capable of leading to mischievous actions, contrary to the laws, I abstain from judging, because I admit that sane and reasonable men are capable, by nobler motives, and by the effect of fortunate habits, of controlling these propensities, or of employing them in a lawful manner. For this reason, I do not pursue such researches in my social relations, especially where there can result from them no valuable information.

In a prison, on the contrary, errors are less easy. I can, by the inspection of a greatly developed organ, the abuse of which leads to crime, pronounce with sufficient confidence on the nature of an offence. First, it is on account of a crime that the individual is imprisoned; ? next, we know that man, excited by energetic propensities, if not retained by powerful motives, ordinarily abandons himself to his natural inclination. There is, then, great reason to suppose, that the offence for which he is punished, is that for which we find in him a marked disposition. We may, indeed, be mistaken; fortuitous circumstances may, sometimes, for the time urge a man to acts for which he feels himself no very strong propensity. We often meet robbers and assassins, in whom the organs for theft and murder have not acquired an extraordinary development. But, in this case, the malefactor has been drawn in by seduction, by misery, by unruly passions, such as jealousy, resentment, a quarrel, or other unfortunate occurrences. We are rarely deceived, when the question relates to incorrigible malefactors, or persons, who, from their childhood, have manifested evil dispositions, or criminal propensities; in these, the development of the organ is evident. If the features, the gestures, mien, or language, betray want of education, or of the exercise of the intellectual faculties; if the rest of the organization of the brain is not favorable, it will almost always happen, that the actions will accord with this unfortunate organization.

It was in conformity with these maxims, that at the conciergerie (stadtvogtey) of Berlin, I pronounced not only on the nature of the crimes of a prisoner, but also on the great difficulty of correcting his obstinate propensity to theft. I declared that this prisoner, named Columbus, was the most dangerous robber among *the adults* that they had presented to us. Columbus was afterwards sentenced to imprisonment for three years, at the end of which time he was released, in 1808. But he had enjoyed his liberty hardly a month, when he was again shut up. In this short interval, he had committed ten thefts, more or less considerable, and very difficult to execute.*

If the individual appears to have received education, or if several of the organs of the higher order are favorably developed, the judgment to be passed is not so certain; the propensity may have been more easily combated; it may at least be presumed, that the illegal action of such an individual may have been modified by some peculiarity. But these cases require a peculiar kind of knowledge, which can be acquired only by long study and multiplied comparisons of cases. This suffices to show my readers that, in passing judgment on malefactors, I take for its basis not the irresistibility of actions, but the organization and nature of man.

---

* This fact is reported in the German paper, entitled Morgenblatt, 1809, 16th May, No. 116; but disfigured and confounded in part with another, of which I shall speak hereafter.

Some of my adversaries have maintained, with impudent dishonesty, that I taught, at least in Germany, the irresistibility of actions, and that it was only the mildness and piety of the French which made me more circumspect.

I esteem my doctrine too much, to change or mutilate it in favor of the opinions or the prejudices of any people. I neither speak nor write for the Germans nor the French, alone. As an observer of nature, my purpose is to present and defend a doctrine, which may be useful to mankind in all places; which may be compatible with all forms of government, and with true morality, and which, in all ages, may be appropriated to the wants of human nature, since it is derived from the nature of things. But I affirm, at the same time, that I have never taught the irresistibility of actions, and that I have always upheld moral freedom. I had, at Vienna, and in the whole course of my journey, hearers of all conditions; many monks, curates, pastors, bishops, instructors. Even several sovereign princes condescended to hear me expound the principles of my doctrine. No one of these persons perceived in it the slightest danger for morality and religion. Many of my auditors have had works printed, which serve to justify my conduct in this respect.

Hardly had I obtained any results from my researches, when I foresaw the objections touching materialism, fatalism and the irresistibility of actions. I therefore had inserted in the *Mercure Allemand*, of Wieland, 1798, No. 12, a letter addressed to Baron Retzer, chief of the imperial censorship of Vienna. In this letter I then answered these objections with these same arguments with which I combat them at present. And what best proves the unfair intentions of this class of adversaries, is, that for more than twenty-five years, no moralist and no ecclesiastic has thought fit to declare himself against my doctrine. On the contrary, better informed as they are than the laity, on the reciprocal influence of physical and moral agents, many of them of different religions, have written works more or less voluminous, in favor of my principles.

Summary of the fourth Section.

I have shown, that in all ages the most contradictory opinions have been denounced and regarded as inspired, by turns; that, consequently, when one makes discoveries, he ought to trouble himself less for the judgment of his contemporaries than for the truth;—that the Gospel the apostles, the fathers of the church, and in general the men who have best understood mankind, those who have most loved and most benefited them, have acknowledged that the qualities of the soul and mind are innate, and their manifestation depends on material conditions;—that those who accuse my doctrine of materialism, confound material conditions with the forces or the faculties, and thereby fall into perpetual contradictions;—that the supposition of a central point which it was thought necessary to consecrate in order to secure the spiritual nature of the soul, does not attain this object, and is at war with the structure and functions of the brain—that even my adversaries, to whom it seems that the plurality of organs favors materialism, are forced to acknowledge this plurality, because the brain is double, and, consequently, each of its parts is so also;—that those who regard as dangerous the division of the faculties of the soul into several fundamental faculties, have, at all times, adopted similar divisions, since they have admitted the faculties of judging, willing, remembering, imagining, &c.; that, consequently, they cannot, in any respect, brand my doctrine, any more than another, with the charge of materialism.

As to fatalism and to moral liberty, I have, likewise, shown, that the most venerable men have acknowledged the most powerful influence of several causes on our determinations; that the sensations, propensities, desires, as well as the ideas and the judgments of man, are submitted to determinate laws; but that we cannot thence infer either the fatalism, which makes the world to be derived from chance, or which does not ascribe the direction of it to a Supreme Intelligence, nor that other fatalism, which subjects the actions of men to a blind chance; that an unlimited and absolute liberty are repugnant to the nature of a created being, but that the reasonable man, by virtue of the faculties whose number and dignity elevate him above the brutes, has acquired the power of fixing his attention, not only on impulses from within and without, but also on those highest motives which he finds within him, or receives from abroad, and of being thereby enabled either to be determined by existing motives, or to determine himself by new motives, which the well-organized man can continually call to his aid; that this faculty constitutes true moral liberty; and that this practical liberty is the only kind which is contemplated by civil institutions, education, morality and religion; that this liberty, submitted to its proper laws, such as the powerful influence of the most numerous and strongest motives, and especially to that of the desire of happiness, render the man who acts, and his instructors, responsible for all their moral actions; that on this notion of liberty repose the dignity and necessity of education, morals, legislation, punishments, rewards, and religion. It follows, from my doctrine, that, whenever a sane and well-organized man has willed a thing, he might have willed the contrary, not without motive, which would be absurd, but by seeking for, and adopting other motives than those which have determined him.

In fine, I have proved, that without the existence of moral evil, and vicious propensities, there could be neither moral freedom, nor choice between good and evil, nor, consequently, any threatening of future punishments, nor any hope of future reward; that all erroneous opinions and all discussions on practical moral liberty, have had their source in the false ideas which men have formed of the cause of moral evil, and of the propensity to evil; because they confounded contentment, inclination, propensity, desires, the result of the action of particular organs, with the will or wish, the result of the comparison of several sensations and several ideas, as well as of the influence of superior moral and intellectual forces, on the instigations of inferior propensities and faculties.

SECTION V.

APPLICATION OF MY PRINCIPLES TO MAN, CONSIDERED AS AN OBJECT OF EDUCATION AND PUNISHMENT.

Preliminary Suggestions.

THE motives, then, which tend to determine the acts of men, come from two sources. The one class are furnished from our internal forces, the others come from without. Consequently, to direct the will of man, and to appreciate his actions, we must have a profound and particular knowledge of these two elements. This knowledge can be acquired only by the practical study of human nature, by the particular study of each quality and each fundamental faculty, and of the manner in which each one manifests itself, both in the various states of health and disease.

As I cannot fulfil this task, but in the following volumes, I must here limit myself to some general views, which, however, will throw great light on the ulterior discussions of this volume.

First, let us recollect, that man, to a certain degree, has an organization common to him with the brutes, and that he participates in their propensities, feelings, and intellectual faculties. Thus far, man must be considered in the light of an animal. But as a man, he is endowed with superior propensities, feelings and faculties, which constitute in him the character of humanity, and which, as we have seen, render him a moral being.

In his regular state of health, man never shows himself as purely man, nor as simply animal. The various relations which result from his mixed organization, from the intimate union of animal nature with humanity, merit, then, the greatest attention. In this way only shall we have all the data to measure the degree of the moral liberty of each individual, and to divine the use which, according to appearances, he will make of it.

In respect to internal, moral, and intellectual forces, one may establish six very distinct classes in human society. Each of these classes produces a series and an activity of propensities, feelings, and talents, equally differing from the others.

In the first class, the qualities and faculties which are most elevated and proper to man, are completely developed, while the organs of the animal qualities and faculties have only a very feeble degree of development and activity.

In the second class, the organs of the animal qualities and faculties have attained a high degree of development and activity, while the organs of the qualities and faculties peculiar to man alone are but little developed, and have but little activity.

In the third class, the qualities and the faculties common to animals and those proper to man, have acquired considerable development and activity.

In the fourth class, one or at most only a few of the propensities or talents, are developed to an extraordinary degree, while the others have arrived at a degree of development and activity very moderate, or even below mediocrity.

In the fifth class, one or some of the organs are very little developed, and remain in a state of apathy, while the others are more favorably developed and active.

Finally, in the sixth class, the organs common to animals, and those proper to man, are equally moderate in their development.

Let us now observe some general results of these different developments and activities of such and such cerebral parts, when not influenced by motives contrary to their natural impulse or tendency.

When the superior qualities and faculties, proper to the human species, predominate greatly over the qualities and faculties of an inferior order, the man, properly so called, will subdue the animal in him. The internal movements, and the whole conduct of such men, will be conformable to reason, justice, and morality. To judge with candor the weakness of others, to bear with indulgence the errors of their minds, generously to pardon offences, to act always with uprightness, to labor always for the general good, by sacrificing their own interests, to render homage to truth with a wise intrepidity, to show himself above ingratitude and persecution, to ascend from the effect to the cause, and thus to secure himself from prejudice and from superstition; such is mostly the natural tendency of those models and benefactors of our race.

The contrary takes place with those, in whom the organs of the animal qualities and faculties, have reached a very considerable development and activity, while the organs of the superior faculties are but little developed, and have little activity. In these, all is subject to sensuality and error. The animal impulses are numerous and violent, and defeat is the more to be feared as the superior faculties and external aid are more feeble. If unfortunately, the dominant propensities are of the number of those whose excessive activity overthrows social order, will the philosophic judge be astonished, if these men too often become the victims of their organization?

In the case in which the qualities and faculties, common to animals, and, at the same time, those proper to man, are equally active, there will thence result men, who find themselves placed between the animal and man. They are stimulated by the one, and warned by the other; often degraded by one, and often elevated by the other. They are great in vice, and great in virtue; in many respects, they are excellence or wisdom itself; in many respects, also, they are subject to deplorable failings and vices. The most opposite qualities often make of them the most problematic beings; such were Louis XI., Charles V., Philip II., James II., Catherine de Medicis, who, though under the influence of a superstitious devotion, were the scourge of their subjects. These are the persons, who experience, in the most sensible manner, the struggle of two beings at war within them. Such were Socrates, St. Paul, St. Augustin; who, having the most violent combats to sustain, may claim the most glorious prizes of virtue.

When one or some of the qualities or faculties, whether animal or human, possess extraordinary energy, while the others are only moderate, there hence results great genius; great talents in a particular sphere of action, or certain propensities, good or bad, predominating over the rest. These talents and propensities constitute the character of the individual; and such a man will have the more difficulty in resisting their impulse, as the other forces, moral and intellectual, are less active. You have the musician, the mechanic, the poet, all exclusive and ardent in their pursuits; but you have also the debauchee, the bravo, the robber, who, in certain cases, are passionate to such a degree, that the excessive activity of these propensities degenerates into actual madness, and deprives the individual of all power to restrain them.

You see, on the contrary, apathies and partial imbecilities, when, by the side of other qualities and faculties sufficiently well marked, one or a few organs are very little developed. With such an organization, Lessing and Tischbein detest music; Newton and Kant have a horror of women.

Finally, in the sixth class is found the crowd of ordinary men. But as the organs common to the animal occupy the greatest part of the brain, these men remain limited to the sphere of animal qualities; their enjoyments are those of sense, and they never produce in any respect any thing remarkable.

These six principal divisions are confounded by a thousand modifications, as happens to all the great divisions of nature. We know that the organization is rarely so fortunate as to give to the faculties of a superior order the almost certain power of impressing a favorable direction on the inferior faculties. We may, then, admit as a truth, established by the laws of organization, that, among men, a very small number would find, in themselves alone, the force, or sufficient motives, to make a law for themselves, to determine themselves always to acts conformable to the dignity of the noblest propensities, sentiments, and faculties of man.

This would be the place to discuss the question,—which of the two is the more virtuous man, he who does praiseworthy actions only from natural character, or he who has always temptations to withstand.

I have already answered this question in treating of moral liberty. In fact, there is no real virtue, as Cardinal Polignac says, "except when the will, subjected to the empire of reason, arrests the irregular movements of the heart, calms the tumult of the passions, quells their revolt, and subjugates them; a painful victory, and often the price of the greatest efforts. But the greater the self-denial and the sacrifice, the more elevated and sublime is the virtuous act.

Such is the judgment dictated by justice and reflection. But in this, as in every thing, it is not reason, but *obscure* feelings, which determine our conduct, and render us all, without our suspecting it, habitually unjust. Beauty, youth, strength, riches, are every where admired and sought, while ugliness, old age, weakness, poverty, are condemned to the most afflicting privations. In the same manner we give to the man naturally virtuous, as by instinct, all our esteem, all our admiration, while the most approved and the severest virtue of the man in whom we know the existence of a natural propensity to vice, always appears suspicious.

Application of my Principles to Man, considered as the Object of Education.

After what I have now said, it will no longer be objected to me, that the innateness of moral qualities and intellectual faculties, involves the uselessness of education, morality, religion, legislation, punishment, reward. The conviction must have been acquired, that these institutions are indispensable; that in order to determine men to legal, noble, and virtuous acts, and in order that they may determine themselves to such acts, we must develop and cultivate internal means, and multiply and fortify external motives. Pascal has well observed, that one of the most essential advantages of the Christian religion is, that it thoroughly understands human nature; that is, all which is great, and all that is miserable in man, and that it presents to him the purest motives. In fact, the more numerous, noble, and strong are the motives, the more will man be enlightened as to his real interest, and the more disposed to make a good choice of his actions. We shall facilitate the resistance to certain too active propensities with the more success, the earlier the task of repressing them is commenced, and as, by an education appropriate to the individual, and commenced from infancy, we shall give more facility of acting and more energy to the superior propensities, feelings and faculties, and render the idea of the fatal results of immoral actions, more lively and more habitual.

What is the education, public or private; what is the legislation, criminal and civil; what are the measures of government; what are the institutions, social and religious, which give to nations the most virtue, industry, and, consequently, happiness; which engender the fewest vices and crimes, the least persecution, intolerance, atrocities, corruption of domestic manners, trouble and warfare? The solution of these problems would be worthy of the best friends of humanity. Ah! how would the result, obtained in the history of all times, confound those men of darkness, who are ignorant and perverse enough to desire and to order the interdiction of knowledge, and the degradation of nations! who, jealous of the happiness of their fellow-men, substitute for the instruction proper to each condition, for the religion and morality of the Gospel, superstition, prejudices, sterile dogmas and ceremonies, monkish charlatanism, &c., means of extinguishing in every man a sense of his dignity and his rights, and of lording it with little wisdom over dupes and slaves, as vicious as ignorant!

Compare civilized with barbarous times; compare the list of horrors committed among barbarous nations, or, which comes to the same thing, among the ignorant and superstitious! Their false devotion, and their vaunted innocence of manners, will make us shrink with dismay. Who does not know, that these horrors diminish, in proportion as knowledge, civilization, a pure religion, freed from fanaticism, are more generally diffused?

In the prisons, of which we have visited a very large number, we have satisfied ourselves, that the greatest part of the criminals were born in provinces, and in those conditions of life, in which instruction and education, moral as well as civil, are the most neglected. In the same manner, the bands of ferocious brigands, who spread terror in Holland and on the banks of the Rhine, were composed, as similar bands are at present composed, of individual vagabonds, nourished in superstition, but deprived of all positive instruction.

"Why has not Heaven," said Baron Cuvier to the tribunal of legislators, "given me that eloquence of the heart which you admire in your venerable colleague, M. Lainé? How would I depict to you the difference between the poor child, who has received no instruction, and the one, who has been fortunate enough to obtain it? You speak of religion, but how can one preserve religious ideas without establishing their influence over him by reading? You say that misery produces more wretches than ignorance; but is not ignorance itself a source of misery? And the domestic virtues, how are they favored by the habit of reading! Is not the most indifferent book a better and more moral amusement, than the tavern and the debauch?"

The most perfect institutions, it is true, cannot cause crimes and enormities to cease altogether. Yet, we have a right to expect, from good education, a great diminution of moral evil. When we reflect how often it happens to individuals of the lower classes, to be educated without care, or to be imbued only with prejudices and superstition, we are astonished that more evil is not committed, and are forced to acknowledge the natural goodness of the human race. A thousand unhappy circumstances are combined to spread the most dangerous snares, for the man born in the lower class of the people; plunged in profound ignorance, deprived of all that might have formed the qualities of his mind and soul, he has but very inexact notions of morality and religion: even the obligations of society and the laws are generally unknown to him: solely occupied with earning his bread, gross and noisy amusements, gaming and drunkenness, make him a prey to base and violent passions: on all sides he is surrounded with temptations, lies, prejudices, and superstition: he is constantly told of pretended sorcerers, conjurers, treasure finders, magicians, interpreters of dreams, expounders of cards: he has placed before his eyes, lotteries, and all sorts of games of chance, which take the last mouthful of bread from thousands of famished children. These are scourges, of which a friend of humanity cannot, without horror, foresee the eternal duration! How many domestic miseries, how many suicides, larcenies, secret robberies, flow from these fatal sources![*]

A mere prejudice is often the cause of the most horrible actions. Some years since, a man killed the neighbor of his deceased uncle, for the purpose of avenging the illness and death of this uncle, the effects, as he said, of the machinations of the neighbor, whom he regarded as a sorcerer. A mother killed and roasted her child, that the fat of this innocent creature might serve to cure the rheumatic pains of her husband. A band of robbers thought to expiate the most atrocious murders, by muttering some paternosters over their victims. Iltis Jacob regarded the murder, which he committed on his wife, as entirely effaced, as soon as he had ordered some masses to be said for her and for himself. [History of Schinderhannes.] In such occurrences, I regard those at the head of public instruction, as accomplices and abettors of the crime. What ministers of religion, what shepherds are those, who can suffer their flock to wander thus?

With a view to such considerations, those sovereigns who have conceived the noble and generous wish of giving good morals to their subjects, and securing their happiness, have always favored public instruction, the teaching of morality and religion, the arts and the sciences. The Gospel has recommended to us, to let our light shine among men, and to proclaim the truth in a loud voice;[†] the apostles and fathers have regarded ignorance as the source of all evils.[‡]

We ought to say, for the honor of the age in which we live, that most states distinguish themselves by establishing excellent schools. In several places there is even given to adults, who have been neglected, the same education as to children. Schools have been founded for the instruction of teachers. Persons who wish to marry, are reminded of what belongs to the physical and moral education of children, and of the duties of marriage. Governments have begun to cause excellent tracts to be written on morality and education, reduced to the form of tales and romances, and adapted to the understanding of the lower classes, and designed for gratuitous distribution among them.

---

[*] Let any one read the energetic discourses and addresses made, of late years, by Messrs. Keratry, and Delessert, on the lottery, and on gaming houses, and he will be astonished, that these abominations are still tolerated, and even find defenders.

[†] St. Matt. v. 16. St. Mark, ch. iv. 21.

[‡] All evil comes from two sources, ignorance and weakness. *St. August.*

This is not the place to describe all the useful establishments we have seen; but I cannot refrain from giving to M. Bœrens, of Copenhagen, that venerable philanthropist, my tribute of respect. This excellent man had founded two seminaries of education, to which children of the lowest class were admitted. Not only were they instructed gratuitously, as in the five other public schools of Copenhagen, but their meals were furnished them also. In the morning, on entering the school, they had to wash, then they breakfasted, then received their lessons in reading, writing, and other branches of knowledge for which they exhibited any inclination. In the periods of recreation, they were exercised in gymnastic games. After this, the boys were taught trades and mechanical arts; and the girls were instructed in sewing, embroidery, and divers domestic works. In the evening after supping, they returned home. The proceeds of their labor belonged to the establishment. The sick were attended gratuitously by Doctor Wendts. How many benefits did this institution not produce! It afforded means to poor parents to devote themselves to their occupations, from which they were no longer detained by the care of their children. Those, on the other hand, were accustomed to neatness, order, economy, to labor and social life; their moral and intellectual qualities were formed; they even sought, by edifying hymns, by music, &c. to give more delicacy to their sentiments.

In general, all establishments, where individuals who are in want, find employment, also merit the greatest commendation; but if there do not previously exist in these individuals, a habit of gaining their living honestly the end of these institutions is only in part attained. In fact, either these individuals do not resort to these work-houses, or the police is obliged to employ coercive means to withdraw them from idleness. The wisest regulations cannot always have sufficient influence, because men accustomed to idleness, find, without ceasing, an infinity of subterfuges, to escape the measures of the best regulated administration.

With a rude people, the magistrates are commonly obliged to command and to forbid, what they must do and what they must not. In revenge, the people elude these arbitrary orders of their superiors, whenever they think they can do it with impunity. But when a man has received previous education, he generally holds a better regulated course, and submits himself to the laws and regulations with less repugnance. The authorities act, then, in conformity to human nature, when they join to the ordinances, motives which oblige them, because then, even in the eyes of him to whom they might appear oppressive and arbitrary, all appearance of constraint is withdrawn. On the other hand, a benevolent legislation will avoid multiplying laws, knowing that, as St. Paul says, the more laws, the more sins.

Application of my Principles to Man, considered as an object of Correction and Punishment.

To treat this subject pertinently, would require volumes. I am, therefore, obliged to limit myself to describing the grounds on which our conduct towards malefactors should rest.

Not being well informed on the true sources of our determinations, legislators as well as moralists, have confined themselves exclusively to the will. Under this expression they imagined to themselves, as it were, a peculiar being, and rendered independent of the organization of the sex, of the constitution, &c. At most, it was only the age of minority, which they considered as deserving some consideration. Did the man show an evil disposition? it was because he willed it. Did he do evil? it was that he had strongly wished to do it. Little was thought of the difference, which exists between the propensities and the voluntary determination; still less of the various motives, internal and external, which cause this determination. Delicts and crimes have been considered in themselves, without regard to the wants and the position of the individual who was their author. To change the will of malefactors, it was long thought sufficient to inflict penalties. Hence, every where resulted criminal laws, which only go to determine what are the culpable actions, and to fix for each of these material acts a proportionate punishment, but always the same, whatever the difference of the individual acting. The aggravating or extenuating circumstances are rather sought in accidental external things, than in the peculiar position, or the internal state of the malefactor.

If any one wishes to bring back this defective legislation to principles founded on the nature of man; if he prove the existence of innate propensities, and that man no more has the choice of possessing propensities, more or less imperious, than of having talents more or less decided; that these propensities are one of the main springs of our actions; immediately they go to the opposite extreme. If the evil propensities are innate, say they, there is no longer any culpability in vice and in crime; no one can prevent himself from doing evil; and a criminal has only to say, that he has such or such a propensity, to excuse all his actions and secure himself from every accusation.

My readers are sufficiently prepared, for me to leave to them the refutation of this language. They must also be convinced, that if men were left to themselves, they would not all find within, motives equally numerous and equally powerful for doing good, and avoiding evil; they know that propensities exist, whose excessive activity constitutes unlawful inclinations, whose abusive action lead to evil: they know also every man is not morally free to an equal extent, and that consequently every man, when the question relates to internal culpability, is not equally culpable, although the material act and the external guilt are the same thing. The same action may be indifferent in one man, while in another it becomes the object of moral responsibility. Thus the same action, which for one is subject of blame and just punishment, in another is only a subject of compassion. To appreciate the degree of internal criminality, it is necessary to measure accurately the influence of age, sex, the state of health, the moral condition, and a thousand other circumstances present at the moment of the illegal act. But by whom is this state of things so well known, that man can pass a uniformly equitable judgment on the merit and demerit of his fellow-men? This is possible only to that Being who searcheth the reins and the heart. This, if the question is in relation to the exercise of justice in its strictest sense, we must refer to God alone.

All wise legislation, therefore, ought to renounce the pretension of exercising justice. It ought to propose an end which it is possible to attain, and which secures the good of the citizens in particular, and that of society in general. This end ought to be, so far as the nature of man permits, to prevent *delicts* and crimes, to punish malefactors, and to place society in security as respects those who are incorrigible. This is all which can reasonably be required from human institutions.

How can we attain this end?

Of Houses of Correction and Prisons.

There are some organizations so defective, and some combinations of circumstances so unfortunate, that it is absolutely impossible to prevent all crimes, even the most atrocious. We can only hope, whatever means we may employ, to diminish the number of malefactors.

We have seen that the want of instruction, ignorance of moral and religious precepts, of the laws of duties toward men and toward God, are some of the principal sources of the criminal aberrations of men. We must then supply from without, what is wanting to these individuals on the part of internal organization and education. It is necessary, in the first place, that prisons should become houses of correction. The treatment which has been used in prisons toward criminals, and which still continues the same in many places, would entirely defeat the end of all correction.

Ordinary criminals, even when their crimes were different, were commonly collected in large numbers. We have, in fact, often seen individuals merely arraigned for trial, mingled with prisoners already condemned. In certain places, all were idle; ordinarily, they are occupied in labor, sometimes too easy, sometimes too difficult, often filthy and noxious, and almost always unprofitable. They avail themselves of every moment when they can escape notice, to recount to one another their adventures, each one finding great satisfaction in making known to others his own performances; and in this manner, as the prisoners themselves say, the prisons are like schools, in which all kinds of villanies are taught. The corruption of the new comer, especially when from natural propensity he finds pleasure in this species of instruction, is soon accomplished. He soon habituates himself to living in intimacy with the refuse of men. All shame, all horror of crime and of criminals, disappears; they become acquainted, make friends of each other, and concert joint plans for the future. Hardly are any set at liberty, when they seek to unite to resume with more audacity their former mode of life. There remains, in fact, to most of those who leave the prison, no other course to pursue. They are sent out without money, and without being assigned any determinate occupation. In some countries, they are not even under the immediate watch of the police; many, beside, are banished, and it follows that the neighboring states are infested with banditti. It seems to me, that this last species of punishment ought, at most, to be admissible only for political offences. Is the individual subjected to the punishment of branding? he is then publicly disgraced? what will become of him? who will work with him? who will employ him? Not only are all these punishments without any real object, but they oblige these wretches to devote themselves to crime, on pain of starving to death. Branding can serve no other purpose, than to betray those malefactors who fall again into crime, and who have escaped from the prisons, to which they had been condemned for life.

The prison is not always the kind of punishment, which suits the character of the criminal and his peculiar propensities to evil. The society they enjoy, renders their lives less miserable. If they are ill fed, they are at least secured from all the wants common to this class of men; they are clothed, and preserved from the injuries of the air. We have even seen some, who procured their own arrest, in order to find a refuge in the prison. Men and women are often left together, whence it happens that in the prisons themselves, their numbers are multiplied. Sometimes the prisoners are permitted to have their children with them. On the other hand, the punishments in prisons are often heavier than the law prescribes, especially when the buildings are dirty, or placed in a damp soil, or constructed with stones, which attract and transmit the humidity of the atmosphere. Hence arises the so general alteration of the fluids and the solids; hence emanates tumors, glandular and cutaneous affections, pneumonia, blindness, &c. If the food is bad, and consists principally in dry pulse, this regimen is followed by dysenteries, which soon become mortal. When the punishment of a criminal is limited to a detention for a stated time, it would be in accordance with the spirit of the sentence, to inflict the punishment so as not to destroy the individual's health. Ill constructed and badly organized prisons injure the social state in many respects, and the prisoners who are accustomed to inaction, or to such labors as spinning wool, or sawing dye-woods, which will not answer for them when placed at liberty, often remain a long time without resource. It is not surprising, then, that we find the prisons generally peopled with persons who return to them the second and even the tenth time.

This faithful picture of places of confinement, shows the urgent necessity of combining in them all the institutions, proper to furnish to those who have been seduced, and those naturally wicked, all sorts of means to induce them to act conformably to social order, and to their own good.

These principles were not new at the time of the first impression of my work, and fortunately they are still less so at this moment. Men had long since insisted on the instruction of the ignorant, on the reform of the erring, on the amelioration of criminals, and the extirpation of vices. But these rules have not been very generally executed. It is at Philadelphia, that they have been put in practice for the first time.* The happy effects which resulted hence, have encouraged other humane governments to imitate the example. Several States, besides prisons, have established houses of reformation, and correction, where instruction is the principal object, and where they habituate the inmates to constant toil and an honest trade. On the other hand, punishment is no longer the only object in prisons; there is also regard had to the moral correction. There are daily given to the prisoners, lessons in reading, writing, calculation, morals and religion. It is also sought to direct their attention to the duties of the citizen, and to the mutual relations of social life. Those who know no trade, are compelled to learn one; and those who conduct in the best manner, serve afterwards as masters and overseers. Those who know a trade, practise it.

---

* Of the prisons of Philadelphia; by a European, M. Liancourt.

We may consider a prison, conducted in this way, as a manufactory. The labor of the prisoners provides abundantly for the maintenance of the house; and by giving them better food, it follows that scarce six in a hundred are incapable of working. Hence is avoided that kind of injustice, which arises from feeding the disturbers of the public peace at the expense of society. What each individual gains above the sum prescribed, is placed in reserve; part is given to his family, if in want, or it is given to the prisoner himself at his departure, that he may not be obliged to commit any excesses while waiting for work.

In such establishments, the principle is duly regarded that food and drink have great influence on the actions of men. It is therefore attempted, by wholesome and simple diet, and by the absence of inebriating liquors, to calm the effervescence of the passions. The efficacy of all these measures, and of the employment of the noblest motives, is made manifest, by a comparison of the recommitments which take place in the common prisons, and those which occur in these establishments. In the first, it is calculated that among the prisoners, there are at least one half, if not three fourths, who are there for the second time; in the second, on the contrary, of an hundred who are set at liberty, scarce two again return.*

Though constant experience has taught, that such treatment is no less profitable to the state, than to the unhappy criminal, yet I have heard the remark made by some, that the only obligation of the state toward such beings, was to punish them, and that, as for education and instruction, it was for them to provide for it.

"But these are precisely the men," said the generous monarch of Bavaria to us, "who have the greatest need of assistance of this kind. How, in fact, can we exact social virtues from persons, who are absolutely ignorant what relations exist between their own private interests and those of society, and who are besides a prey to the violence of their own gross passions? Besides, no crime is ever committed, without the life of innocent men, or their property, being the sacrifice." Let us then do that for society, which we will not do for the criminal. It will only be, when we have united to punishment the care of instructing the mind and forming the heart, that we shall be able to satisfy ourselves, that, in conformity to the law which directs us to prevent crimes,* we have done for these wretches, and for the state, all that is recommended by experience, the laws of man's organization, and the knowledge of his wants. So long as we are contented with forbidding and with punishing, we hold out an inducement to obedience, it is true, but this inducement acts only so long as the punishment appears certain.† By enlightening the mind, on the contrary, by abundantly supplying it with the noblest motives drawn from morality and religion, means are given him, the force of which is never lost. Man then learns to recognize witnesses of his actions, from whose vigilance he cannot escape. Let us never lose sight of the fact, that of two objects, man does not, without motive, choose one in preference to the other, and that the perfection of the will consists in the knowledge of the goodness and excellence of the motives.

---

* To understand this subject more fully, see, besides the work on the Philadelphia prisons, that of John Howard, on prisons, hospitals, and houses of correction, and the introduction to the code of public safety, reduced to a plan for the states of his majesty the king of Bavaria, by *Scipio* Bexon.

The benefits produced for some years by the Royal Society for the Amelioration of Prisons, founded in 1819, under the ministry of the Duke of Decazes, are too striking and too well known, to make it necessary for me to dilate upon this generous enterprise. Let my readers examine the statistics, the various reports made by Counts Dru, de la Borde, &c.

Unhappily, all these generous efforts will fail of entire success, so long as criminal legislation continues to condemn to the *collar* (carcan) and to branding, for crimes which are judged insufficient to deserve perpetual imprisonment.

---

* Beccaria on Crimes and Punishments, § 36.

† Homel, Gedanken über das Criminat recht.

Of Repentance, or of the Conscience of Malefactors.

It is commonly imagined, that malefactors, who are condemned only to imprisonment of greater or less duration, end with repentance, and finally resolving to renounce their evil habits and return to good behavior. Nay, more; the hope is cherished, that those condemned to perpetual imprisonment, to hard labor for life, to the punishment of death, will make a sincere confession of all their crimes and all their accomplices, and in their effort to obtain pardon, at least in the other world, will be tormented by the stings of conscience and will experience sincere repentance.

But experience, in this respect, gives a very different result. I do not deny that some criminals experience sincere repentance: there are some who have been drawn into crime by want of reflection, by an unfortunate fit of passion, by poverty and want, by seduction, and other very pressing external circumstances. If, for instance, a dishonored and abandoned mother, in an instant of wild despair, lays a trembling hand on her child, and deprives it of life, its innocent blood will always be present to her eyes, and will poison every moment of her existence. When once the fatal concurrence of circumstances has passed, the milder feelings within will again be awakened. There then appears a total contradiction between the natural sentiments and the act committed; and this contradiction is what constitutes repentance, or the *natural* conscience. We saw a man at Spandau, who had killed his wife in a violent fit of anger: this man was so unhappy, that he eagerly demanded death, to be delivered from the insupportable burden of his remorse. Charles Benzel, born of good parents and with an internal disposition to piety, had been well educated; accordingly, he was the only one of all the band of Schinderhannes, who repented of his conduct.

But he, who is drawn into crime by internal propensity, will rarely experience natural repentance. In such a man, the inclinations which lead to evil are predominant—if the expression may be used, they compose his proper character; consequently, all the acts which emanate from him are in harmony with his whole being, and the tranquillity of his soul is rarely disturbed by them. This depraved view of man may naturally displease some of those persons, whose dreams are only of the dignity of the human species. But, examine the usurer, the libertine, the villain, and you will see that each of them is happy, only in proportion as he satisfies his desires. It is in vain, that the cheated orphan, that betrayed and abandoned innocence often console themselves with the idea, that such a villain will one day feel repentance for his criminal actions.* I have, from my youth, made the sad and alarming observation, that the most perverse men grow proud of their talents for deceiving and abusing, and that they always dwell, with a sentiment of delight, on the striking traits of their disorderly course. Go into the prisons; place yourself in the midst of the prisoners; avoid the appearance of a public functionary, lest you be mocked with pretended repentance; inspire these men with frankness and confidence; with what internal satisfaction, with what joy and pride in wickedness, will the distinguished criminals recount to you their crimes, without forgetting the most insignificant details, and the particular mode they adopted in committing them! If, at any time, one of them gives himself the trouble to speak on the subject with pretended horror, there will generally escape a malignant smile, which betrays his hypocrisy. Most of them employ their wit in uttering the gayest sallies on the most atrocious actions; and frequently, at the moment you shudder with horror, they burst into a laugh. Reckon up in the prisons how many have been remanded, and you will be easily convinced how few have repented.

---

* "The soul of the wicked desireth evil; his neighbor findeth no favor in his eyes." Prov. xxi. 10.

Finally, examine all the remarkable criminals in state trials, judicial proceedings, follow them to the scaffold; with what obstinacy do some deny the most evident facts! with what surprising audacity do they insult the witnesses who accuse them! with what unblushing sincerity, and scrupulous exactness, do others recount a series of horrible crimes! A soldier had committed robbery in twenty churches. They led him to the scaffold, where he still expected to receive pardon. But in place of showing any repentance, he said to auditor Weldermann, at Vienna, "I see there is no more to be done here; I must try to go elsewhere." At Vienna, one Z—— murdered his mistress, in order to rob her of three hundred florins: he then cut up the body, in order to pack it more conveniently in a box. Instead of being troubled by this crime, he goes to a ball, there passes the night, spends all his money, and gives himself up to all the excesses of brutal enjoyment. M. Bruggmanns, professor at Leyden, showed us the skull of the chief of a band of Dutch robbers. This man had thrown several people into the canals, solely to see them struggle against death. "What can they do to me," said he at his trial, "am I not an honest man?" A girl who had aided her mother to kill her father, did not testify the least repentance; when they reproached her with the crime, she shrugged her shoulders and smiled, Schinderhannes, and Heckmann, his accomplice, derived great pleasure in recounting their crimes; their eyes sparkled during the recital. All the accessory circumstances, which seemed to them proper to convey a great idea of them, gave them great satisfaction.

Rossignol used to boast of his barbarity. "Look at this arm," said he; "well, it has cut the throats of sixty-three priests at the Carmes de Paris!" Repeatedly escaping from prison, he re-commenced, and, like all those who are born for wickedness, repeated his robberies, his cruelties, and the most revolting gluttony.

Gobrino Fondulo invited Charles Cavalcato, the head of his family, to come to his country house with nine or ten of his relations; he had them all murdered at a banquet. After this barbarous execution, becoming master of the government of the city, he there practised all sorts of cruelties, until Philip, Visconti duke of Milan, ordered him to be beheaded. His confessor vainly exhorted him to repent of his crimes; he fiercely answered, that he had but one thing to repent of, namely; that he had not hurled from the top of the tower of Cremona, (one of the highest in Europe,) Pope John XXIII., and the Emperor Sigismund, when they had the curiosity to ascend it with him. Read the biographies of the tyrants who have desolated the earth, who have spilled torrents of blood: read the history of all the famous wretches, of the incendiaries; of the most atrocious robbers; and see if you can find one, who ever abandoned crime before justice overtook him. There have even been some, who, at the moment of their execution, in reviewing all the enjoyments with which they had satiated themselves, boasted that none equalled those which cruelty had caused them. But let us terminate these examples which are revolting to humanity! All judicial proceedings justify my observation, that a hardened criminal is rarely accessible to remorse and repentance.

This observation is even confirmed in criminals of an inferior order, whenever, through an unhappy but decided organization, they have been powerfully urged to debauchery, fraud, theft, &c. I have never seen such a voluptuary, to whatever excess he may have carried his indulgence—such a villain, however unhappy he may have rendered numerous families—I have never seen a determined robber, &c., renounce, by sincere repentance, the horrors of their life; but I have seen many, who, being convinced of the abominable character of their habits, and feeling the impossibility of controlling them, have begged, as a favor, that they should be restrained from having it in their power, to give themselves up thenceforth to their destructive propensities.

Since, therefore, sad experience shows us, that this class of criminals is not led by repentance, or by ***natural*** remorse to resist their violent inclinations, it only remains to produce in them an *artificial* conscience, that is to say, a clear idea, a lively conviction of the immorality of their actions, and of the disorder and mischief which must result from them, not only for society, but for themselves ; or, in other words, these men have more need than any others, to have supplied from without, what is wanting in them, on the part of their internal organization.

And here, again, appears a principle, which, however opposed to the precipitate conclusions of rash and inconsiderate persons, is immediately derived from a particular study of human nature in detail, viz. that the greater and more obstinate the resistance, which is offered by the natural dispositions and habits of men, the more necessary it becomes to multiply and strengthen the contrary motives—the more necessary it is to proportion the punishments, and the more perseverance it is necessary to use, in combating them ; so that if we cannot conquer, we may at least restrain and paralyze their exercise. For, the question no longer concerns internal criminality, nor justice in its most rigorous sense : the necessary protection of society is concerned in the prevention of crimes, and the correction of evil-doers, and in placing the community in safety, from the attempts of those who are more or less incorrigible.

The degree of culpability and of expiation differ according to the different condition of the individual, although the illegal act and the punishment be essentially the same.

I foresee with pain, that many years will elapse, before my doctrine on the nature of man, will be universally adopted. And even when this period shall have arrived for physiologists, instructors, philosophers, yet legislators will delay much longer to apply it to the criminal legislation. The laws are to them a sort of religion, the least modification of which appears to them a heresy. It is not a single enlightened man, it is an assembly of several men, who make the laws; and where shall we find a mass of legislators possessing equal knowledge? It is then to be feared that the true wants of human nature may yet remain too generally misunderstood, to allow the criminal code immediately to overcome this multitude of obstacles, prejudices, ancient customs, which hold it bound to the cradle of its infancy.

The penal code determines the nature of crimes and misdemeanors, and then fixes the punishment to be inflicted. It is the nature of the act itself, which furnishes the measure of punishment, without regard to the person committing the act, or the person expiating the crime. Without doubt, we shall meet too many difficulties in proceeding otherwise, and this is judged to be the only means of obtaining perfect equality and impartiality in the administration of justice. But it is evident, that it is precisely in this manner that we render ourselves guilty of the most crying injustice, and, while we almost always fail to obtain a just estimate of the crime, fail equally in the proportionate application of the punishment.

I submit to the consideration of legislators, some considerations, which must necessarily have been presented a thousand times, and which will be refuted a thousand times, perhaps for the sole reason, that their principle has not been tested by an acquaintance with human nature in detail.

Crimes and misdemeanors are not committed of themselves; they cannot, therefore, be considered as abstract beings.

Crimes and offences are the result of the actions of individuals; they therefore receive their character from the nature and situation of these individuals; and they can only be estimated and determined, according to the nature and situation of these same individuals.

You appear to deny these axioms. Well! I shall prove them to you.

You judge, and you punish an act committed in intoxication, or in violent rage, differently from the same act when committed in the full possession of reason, and with premeditation. You judge a theft, a murder, committed by an idiot, a madman, otherwise than you judge a theft, a murder, committed by a man enjoying his reason.

You acknowledge, then, and you must acknowledge, that acts are nothing in themselves; that they receive their character from the individual who committed them.

But why do you refuse to be consistent in the greater part of your criminal prosecutions? I ask you, and let your conscience answer me:

Is that the same sort of robbery, which is committed by a dishonest gamester, by a robust idler, by a debauched usurer, as that committed by a feeble widow, lying in extreme want with numerous children, crying to her for bread?

Is that the same sort of murder, which is committed by an insulted brother, against the perjured seducer of his beloved sister, as that committed by a son-in-law, who, the sooner to riot in profusion and debauchery, poisons the parents of his wife?

Pursue, yourselves, the list of crimes and offences, the degree of whose criminality, differs totally, and which in your legislation, are confounded in the same rank, and say if I am wrong to reproach to you, that criminal legislation is yet in its infancy?

In general, without turning our eyes on a thousand other extenuating or aggravating circumstances, which do not at all influence your final judgment, how have you been able to decide, that the actions of men without education, ignorant even of the existence of a penal code, superstitious, at the mercy of violent and gross passions, &c., ought to be stamped with the same degree of immorality and culpability as the actions of men, who, knowing the whole extent, and the whole danger of their perversity, surround it with cunning and hypocrisy, the better to secure the impunity of their crimes?

For the same reason, you will not persuade me, that the prison, branding, the collar, (carcan,) corporal punishment, hard labor, and even death, are the same punishment to persons of all sexes, ages, constitutions, and of all conditions; to vagabonds, unknown, insulated, degraded, accustomed to privations and to hard and precarious living; for that race of the brazen-faced and impudent, who make a boast of their crimes; who are tied to the infamous post of the pillory, walk to the scaffold, gaily insult the spectators, &c., as they are for persons imbued with the principles of honor, accustomed to the comforts of life, connected to society by a respectable family, by a wife and children, but overtaken by crime in an unhappy moment, &c.

These reflections will suffice to make each one sensible, that the measure of the culpability, and the measure of the punishment, should not be derived, either from the matter of the illegal act, nor from any determinate punishment, but solely from the situation of the individual acting.

But, it will be said, in what difficulties do you involve criminal jurisdiction! Certainly it is very easy to say, such a crime, such an offence, demands such a punishment;—all the science of the judge is then reduced to substantiating and determining the fact; as to the application of the punishment, there is no longer the least embarrassment. But it cannot be doubted that, according to these principles, we every instant confound the unfortunate with the wicked; and sometimes must punish too much, sometimes too little, and ever be liable to pass the most misplaced and the most unjust judgments.

The opinions and errors of ideologists and metaphysicians may be indifferent on account of their sterility; but, it is matter of sacred duty, that the opinions of those who exert a more or less powerful influence on the happiness and misery of society, that the opinions of governors, instructors, moralists, legislators, physicians, should be based on the nature and the wants of man.

Of the gradation of Punishments, and of the punishment of Death.

It is with good reason, that men have adopted the principle of the gradation of punishments. We punish the same offence with the more severity, according as it has been more frequently committed, because the repetitions imply a more imperious propensity to crime and greater corruption in the culprit.

We punish differently a simple theft, robberies committed in the night, and with breaking in with armed force, with riot; we act with more severity toward the leader of an insurrection, than his accomplices; against those counterfeiters who coin gold and silver, than those who only stamp coins of copper. We inflict on a mother, who has exposed her infant, different punishments according as the infant has incurred more or less risk of perishing; and by these modifications of the laws, we imply that it is necessary to choose means more and more efficacious, graduated according to the intention of the malefactor, and according to the more or less serious consequences of his crime.

Experience has proved, that, in certain cases, it is even necessary to resort to the punishment of death. But how many objections has not the sensibility of philanthropists raised against the punishment of death? If we regard the punishment of death, as the destruction of a mischievous and incorrigible individual, or as a means of preventing crime, I think, with Montesquieu, J. J. Rousseau, Sonnenfels, Hommel, Filangieri, Schmalz, Kleinschrodt, Feuerbach, Klein, Bexon, and others, that we cannot call in question the right, which society has, of destroying one of its members. To deny this truth, would be to refuse to society the right of providing for its security and good order, and, consequently, of employing all the means and all the motives capable of preventing crimes. Who can doubt that the punishment of death is an effectual means of intimidating the greater part of those whose inclinations are perverse? *

---

* We have serious doubts, not only as to the expediency of capital punishment; but as to our having any right to take life for any offence. Capital punishment must either be defended on the ground that the Scriptures sanction it, or that criminals should be made to receive a certain degree of pain for a certain degree of guilt; or, that the safety of society requires it as terror to prevent a repetition of crime.

We are not satisfied with either position. That there are some passages in the Old Testament, which seem to favor the right of taking life, we do not dispute; but we have higher authority, in the New Testament, for an opposite doctrine. Our Savior sanctioned no such doctrine; although there were many opportunities for him to have done so, if he had considered it just or important.

We cannot conceive of a crime more heinous in its character, than that committed by the Jews—the crucifixion of Christ; yet, what were his last words, in relation to those who were guilty of the greatest crime that ever was committed upon earth? "Father, forgive them, for they know not what they do."

Those who are engaged in criminal legislation would do well to remember this example. The time, we trust, is not far distant, when legislators will not fail to discriminate between the expressions of animal feeling, (revenge) and those which represent the higher and nobler sentiments of our nature, and which are regulated by the intellect; and to respect the latter, while they curb and mistrust the influence of the former. *Retributive* punishment is opposed to the principles of Christianity, and no moral philosophy of modern times upholds it.

The plea, that capital punishment prevents the repetition of crime, we think equally unfounded. We are of opinion, that it is not in the nature of capital punishment to produce the result desired. To suppose that the punishment of one individual will have the effect to destroy

There is room for some very sage distinctions for determining the cases which render the punishment of death indispensable. Can we inflict it on a person whose conduct has always been irreproachable, and who has been urged, by an extremely unfortunate combination of circumstances, to the commission of murder? Such a murderer is neither so wicked nor so incorrigible, as many of the pests of society. Again, it is cruelty to pronounce sentence of death, as the law is in many countries, in crimes to which a large number of individuals are constantly exposed; often by the negligence of others, often by temptations, unhappily too well suited to human frailty, such as theft, &c., or for vices which have little influence on social order, and the immorality of which, however revolting, remains concentrated in the agent, such as certain excesses of sensuality, &c.

If there be a crime, which deserves to be treated as murder the most premeditated, foolish and dangerous, that crime is duelling. Usually for the merest trifles, and sometimes, exasperated by the taunts of a bully by profession, men kill one another, in presence of numerous witnesses! No! I might in vain transport myself to the most barbarous countries and times, I should never be able to conceive their allowing so atrocious, so cruel an outrage on morality to subsist! Prejudice, say you,

---

the propensity to sin in another, is unphilosophical, inasmuch as moral reformation is not the natural effect of such a cause. The only sure remedy against crime is to improve the condition of man. If an individual has violated the laws of God and man, he should be treated rather as a moral patient, than a being capable of appreciating moral excellence. The fact that he does not respect virtue and honor, proves that he is insensible to their influence—and shows the necessity of his being educated entirely with reference to a proper development of them. In order that such a person may be subjected to suitable discipline, to develop his moral sentiments, confinement would become necessary; but it should never be attended by circumstances to degrade the subject in his own estimation. His improvement would depend upon the display of those good qualities in the persons of his keepers, in which he proved himself deficient by his acts of moral turpitude.—[Ed.

demands it. Prejudice! To prejudice, then, the laws must sacrifice the life of the citizens, morality, the precepts of religion, the happiness of families! But how destroy this prejudice? How have other nations destroyed it? But it is not well, you say again, to destroy a prejudice, which upholds courage and honor. What honor, what courage, is it to kill or be killed for a few words which happen to displease you, or for the vanity and admiration of a mistress! Die for your country, perish in defence of her rights, and men will acknowledge your courage. The French nation has certainly no need of these follies, of this braggadocio prowess, to convince the world that she has honor and courage.*

As for the gradation of punishment, many governments wholly omit the punishment of death, except in cases of parricide and regicide. Men, then, regard the punishment of death as the final limit of the rights of justice over the guilty.

But is the punishment of death, without aggravation, always sufficient to prevent crime? Frequently, death itself is no evil. The unfortunate man, as Sonnenfels says, wishes it, because it will deliver him from all his troubles; man, in despair, inflicts it on himself; the martyrs to glory, or religion, run to meet it, to gain a name, or to enjoy the happiness of future life: the laws even suppose that the loss of life will not deter the guilty, since they enjoin the preventing them from destroying themselves in prison. Experience, too, teaches how little the sentence of death agitates them, and with what resolution they go to the scaffold. For those men whose life is a continual scene of crimes and of brutal pleasure, perpetual imprisonment would be a more painful punishment than death. Shame, and regard for the future, are nothing with such wretches: to die is nothing, say they, and there we must end. Does not the consequence follow, then, that the punishment of death ought to be aggravated? Man, considered as a reasonable being, is determined by the strongest and most numerous motives: we must, then, oppose to the criminal, motives the more powerful as his propensity to evil is more energetic, and as the consequences of it are more mischievous; and ordinary death being insufficient, we must seek to deter him by the menace of one more terrible.

---

* Although the custom of duelling is universally condemned, as being barbarous and wicked—yet we are often called upon to read accounts of disgraceful encounters between men high in office and reputation. A few years since, a gentleman in New York wrote a most sensible article against the practice of duelling—and a few months after, fell a victim to the sin which he had so unequivocally condemned.

Phrenology is eminently calculated to do away with this principle of false honor, by teaching men the nature of their passions. They will discover that the principle of honor must have a nobler basis than that of the mere animal propensities. They will discover, that, to be truly honorable is to be truly just, and that the man who cannot control his passions can claim no higher rank than ferocious animals. True honor is a higher sentiment, and to follow the suggestions of the lower propensities where honor has been insulted, is to feel like a man, and to think like an animal. [Ed.

To give to this exception an appearance of philosophy and justice, it is said, that the enormity of the crimes for which the punishment of death is established, hardly permits us to perceive the smallest difference between them, and that, consequently, we cannot introduce any modification of the punishment of death.

If we must judge of crimes from the malignity of the malefactor, and the evils which result from them; if it be even established as an axiom, that a crime consists in the act itself, and in the intention of the evil doer, these principles, against which there is nothing to object, cannot agree with the assertion, that all capital crimes are nearly equal, and, consequently, merit equal punishment. Can we maintain that the man who, for revenge kills with deliberate purpose the destroyer of the happiness of his life; that he, who, exasperated by the infamous conduct of a traitor, immolates him to his resentment; that a young girl, without experience and a prey to despair, who destroys her infant, are criminals as great, as corrupt as the prostitute, who murders the companions of her debaucheries, in order to rob them of the little they possess; as the bandit, whose whole life is but a tissue of robbery and murder? Can we say, that the murderer who destroys a single man, is as dangerous as the monsters, who, urged by infernal cupidity, poison several individuals, and even whole families; who have no horror of the most atrocious means, provided they attain their end, and who spread terror, devastation, and death, on the highways, in forests, and in villages?—as the traitor who plunges a whole nation into the most frightful miseries? On the one hand, is it not deplorable, and on the other, is it not in some sort a subject of pride for the greatest criminals, that we annihilate all distinction between acts so dissimilar? Has not the ferocious wretch reason to heap cruelty on cruelty to gratify his sanguinary and insatiable desires, when, in mnltiplying his offences, he neither aggravates the enormity of his crimes, nor the punishment he has to dread?

To all this, it is objected, that simple death is the severest punishment which can be inflicted on a criminal; that it suffices to place society in security against the crimes which he might afterwards commit; and that, consequently, the punishment of aggravated death would be barbarity. I answer, that punishments cannot, and should not, be the sole end of the legislator and the judge. The end of arresting and deterring criminals is not gained simply by the punishment of death. It is certain that determined malefactors fear it very little. How many prisoners have put an end to their lives to deliver themselves from perpetual imprisonment! How many have killed themselves to escape public execution! A great number prefer death to blows and torture. We must, then, employ more energetic means to terrify this brood of villains, and to set bounds to their inveterate wickedness. In fact, if the depravity of the criminals, who, under the law, merit death, is not in all to the same degree; if the acts of these criminals are sometimes more, sometimes less prejudicial to the interests of society, it is right that the punishment of death, like every other punishment, should be modified and graduated. Every criminal will not regard, as indifferent, every kind of imaginable capital punishment; the prisoner, the incendiary, the bandit, will not view a slow and painful death with the same indifference as they would regard the destruction which takes place instantaneously.*

All the principles which I have now laid down, on the means of correcting criminals, and of diminishing their number, result as immediate consequences from my doctrine of the innateness of the faculties of the soul and mind, and on moral liberty. Will it now be said, that this doctrine favors crime?

I have spoken thus far of criminals, whose culpability could not be called in question; but it is still my duty to direct the attention to those extremely complicated cases, where we find great difficulty in determining the degree of moral liberty and responsibility of the individual.

Application of my principles to illegal actions, where the determination of the moral liberty and of the degree of responsibility is subject to peculiar difficulties.

Men have always regarded, as extenuating motives, the violent affections and the passions, such as anger, indignation, jealousy, &c., when these emotions surprise men, and hurry them into a criminal action. When a man is irritated, when his rage, manifested by external signs, turns against himself; when he tears his hair, beats his breast, wounds himself, and dashes his head against the walls; and when, boiling and foaming with rage, he stamps with violence; if, at this moment, he seizes the object of his wrath and despatches him; although in this state of transport, notwithstanding the fury which inspires him, he knows the frightful misery into which he is on the point of plunging; though for an instant he recoils, and again regarding the action he is on the point of committing as a lawful vengeance, he imposes on himself by the appearance of tranquil reflection; and, finally, the arrow flies with so much more swiftness as the bow was more strongly stretched. Every one will be inclined to regard this situation on account of its very violence, as a passing folly, a temporary madness, and to view the acts committed during its continuance as, in some sort, acts, without premeditation and without consciousness, and not those of a free agent.

---

* These are purely the suggestions of destructiveness—and we are not a little surprised, to find that so discriminating a mind as that of Dr. Gall, should ever sanction such sentiments. Perhaps, however, as he was accused of holding doctrines too mild for the safety of society, so far as criminals were concerned, he was induced to the opposite extreme, by expressing the state of his feelings, rather than the results of a deliberate judgment. [ED.

But are promptitude and impetuosity the only characteristics of violent affections and passions? It often happens that, although the storm is raised in the mind, external circumstances retard the explosion, and it is not the case with every man, that the liveliest sensations burst out the most suddenly. He who is moved by strong anger, often succeeds in smothering it, and both the mind and the body are more strongly agitated than if he allowed it free course. Shame, the afflicting sense of injustice, the despair which dishonor produces, the jealousy whose torments are unceasingly renewed, do not less darken the mind of man, than the sudden attacks of a more impetuous affection or passion. The deeper a painful sentiment is, and the longer it gnaws upon the mind, the more does it weaken the powers, and the more violently agitate the soul. An atrocious resolution, adopted in this state, must then be regarded, under many circumstances, as at once the effect of the strongest emotion, and as the consequence of impaired health and perverted judgment.

Of Infanticide.

It is especially in this point of view, that we ought to consider infanticide, as it occurs most generally. I have already expressed, with some warmth, my animadversion against an opinion, which seems to excuse the destruction of the fetus; so that I cannot be charged with wishing to undertake the defence of a crime so odious, when voluntary; but, in the view of justice and morality, it is very important to know in what case infanticide, committed under the circumstances which ordinarily accompany it, deserves this name, and calls for the whole rigor of the law. Legislators and judges are sometimes more severe, sometimes more indulgent, according as they are determined rather by their individual feelings, than with reference to the principles of physiology. "Is it possible," say one class, "to imagine an act more inhuman than that of a mother, who, deaf to the cries of nature, deprives her child of life, even at the moment when it seeks for the first time the maternal breast?" "But," answer another class, "it is precisely because infanticide is repugnant to nature, and because the hearts of all mothers revolt at the idea of this crime, that we cannot suppose such an act possible, except in a moment of mental aberration, when the mind, assailed, pressed, weakened by horrible sensations, is in a state of delirium."

We relate in our course of lectures, the numerous observations with which experience has supplied us on this subject, and we express our opinion without reserve. I shall again refer to this subject, in its physiological relations, when I shall have occasion to speak of the natural disposition of the female, both animal and human, to protect its young. As to the moral judgment we ought to pass on infanticide, and its various degrees of criminality, a letter of William Hunter seems to me so remarkable, and so much in accordance with my own principles, that, in presenting it to the observation of my readers, I shall but give my own opinions. The letter may be found in the Bul. des Sc. Méd. published in the name of the Medical Society of Emulation of Paris, 5th year, Vol. v. May, 1810, p. 321.

William Hunter to the Royal Society of London.

"GENTLEMEN,

"In those unfortunate circumstances, where the mother of an illegitimate child, is accused of having destroyed it, and, in general, in every criminal and suspected action, reason and equity require, that we should weigh with care the minutest circumstances, in order to be assured of the views and motives which have influenced the accused; for, as there is no crime to which imagination and prejudice may not add particulars which aggravate it, so there is none so odious, or so revolting, that motives and circumstances cannot palliate. Whoever wishes justly to appreciate human actions, ought to be governed, in a great measure, by the state of the mind of those who commit them; and for this reason it is, that the legislation of all countries is so indulgent in cases of insanity. Maniacs are never regarded as responsible for their acts.

"My profession has favored me with opportunities of studying the character of women, in a great number of individuals, in all orders of society, and in all relations. Admitted to their intimate confidence, I have given them my advice in the most cruel moments of physical or moral agony. I have observed how they conduct themselves at the approach of imminent danger: I have heard their last and most serious reflections, when they were sure of having but a few hours longer to live.

"Now, from the result of a long experience, I take it upon myself to advance, that women, who find themselves pregnant, and dare not disclose their situation, have, in ordinary cases, a right to all our compassion, and are, in general, less culpable than we suppose them to be. Almost always the crime, even the barbarity, are on the side of the father of the infant; the mother is weak, credulous, and abused. The seducer having obtained what he desires, thinks no more of his promises; the unfortunate woman sees herself betrayed, deprived of the love, the care, and the support with which she flattered herself, condemned hereafter to contend as she can, against disease, chagrin, poverty, shame—in one word, against a desertion which threatens her whole life. An abandoned woman will never be reduced to this deplorable situation, because she is insensible to opprobrium; but the female in whom a vivid sentiment of shame inspires, above every thing, the desire of consideration, frequently has not sufficient strength of mind to support the misfortunes that I have just described. In her delirium, she terminates those days which have become insupportable to her; and what man, however little compassionate he may be, will dare to manifest his indignation against her memory?

"If she had not heard (says she to herself) the faithless vows and protestations of our sex, she might have been, during the happy course of a long life, a tender and chaste wife, a virtuous and respectable mother. This reflection increasing her despair, determines her to throw herself into the arms of eternity.

"It will be objected, that this crime is the more serious, inasmuch as she destroys her child, with the blow with which she destroys herself. Let us refrain from believing, that the action of killing is always a murder: it merits the name only when it is executed voluntarily and with a culpable intention. But, when one is impelled to it by a frenzy, which derives its source in despair, can it seem more culpable in the sight of God, than if it were committed in an access of fever, or in a state of absolute madness? It ought, then, at least to excite as much pity as horror. It would be sufficient to know all the circumstances attending those cases that are commonly treated as infanticides, to make us tremble to comprehend actions so different in guilt, under a denomination which justly demands the severity of the laws.

" Without doubt, a weak and forlorn being may be deprived of life with a premeditated design : it is then a crime, not only contrary to the universal laws of humanity, but to that active and powerful instinct, which, from wise and benevolent views, the Creator has implanted in the heart of all mothers, and which leads them to undertake every thing for the preservation of their young. The most charitable construction that can be put upon this barbarous action, (and God grant that it may most often be founded in probability,) would be to regard it as the consequence of accidental madness.

" As well as I am able to judge, the greatest number of these pretended murders is very far from deserving this name. The mother cannot support the idea of her shame, and burns to preserve her reputation. She was virtuous and esteemed: she does not feel sufficient courage to wait and avow her infamy. As her hopes decrease of escaping observation, in relation to her pregnancy, or of being relieved from her apprehensions by some unexpected casualty, she sees every day the danger increase, and approach nearer : she is more and more troubled by fear and despair. Many would then commit suicide, if they did not know that such an act would infallibly lead to judicial researches, which would disclose what they have so great a desire to keep secret. In this perplexity, where the idea of destroying the child does not present itself to their imagination, they form many plans to conceal its birth. But on all sides difficulties multiply; irresolute and vacillating, they do not sufficiently regard the fatal moment, and end by trusting too much to chance and events. Often they are surprised sooner than they expected; all their plans are disconcerted; chagrin and suffering deprive them of judgment. If their weakness is not extreme, they fly at the height of their pains, and are delivered alone in some place, in which their fright and confusion have led them to seek a refuge; there remaining faint and insensible, and, consequently, not in a condition to attend to what takes place about them; and, on coming to themselves, and recovering their exhausted spirits, they find their infant dead. Ought we to expect to see them divulge their secret, when it is of no use? Do not their most virtuous feelings impose upon them a law to save their reputation? They hasten, then, to conceal, the best way they possibly can, the least traces of the event; being well aware, that if they are discovered, this conduct will be evidence against them.

" In general, I have observed, that, the more sincerely women repented of having been weak, the more difficult it was to draw from them a confession; and this is natural. From a great number of examples that I could cite, I will choose the following:—

" I have, on one occasion, dissected two girls, who, during life, enjoyed an unspotted reputation. Called to attend them during their sickness, I was duped by both. One of them had, however, excited in me some distrust, and I endeavored to make her acknowledge to me what I suspected. I promised her that I would do all that depended on me, to screen her from the unfortunate consequences which she might fear; but she preserved a stubborn silence to my attempts and inducements. Both died in the most violent pains, attended with convulsions. When the people came to carry away their bodies, there was found in one of the beds a dead infant, not yet arrived at its full term, laying near its unfortunate mother; the other presented the same spectacle, except that the birth had not wholly taken place. We see, by this, what patience and what courage the fear of shame is capable of producing.

" A young girl, being pregnant, having concealed her situation, was delivered by herself during the night. She was suspected, search was made, and the child was found in a box enveloped in damp clothes. She confess-

d having given birth to it, but she denied having killed
, or even of having had the intention. I opened the
ody of the child with Mr. Pinkston, and the lungs
oated when we put them in water. The mother thus
ld her story. She lived in the service of masters, whose
egard she had gained by her fidelity, and she was sure,
y quitting them, to excite suspicions, which would in-
uce them to neglect nothing to discover her situation,
nd the discovery, as she supposed, would lose her the
ituation she held. In this agony of mind, she remained
rresolute, and from day to day became more and more
ncertain as to the conduct she should pursue. She
ade, however, some swaddling clothes for her child, a
ircumstance which pleaded in her favor; she hired, in
n adjoining street, a furnished chamber, which she en-
ined upon the landlord to prepare for the reception of
woman in labor, at a moment's notice. Her design
as, to go there as soon as she perceived the earliest
ains, and to have a midwife instantly called: she would
ave returned immediately to her master, explaining, as
ell as she could; her absence. She had heard it told of
e wives of soldiers, who, after having been confined
ehind an hedge, took their infant and followed their
usband; she thought herself capable of doing as much.
uring the night that preceded the birth of the child,
e felt pains, and dressed herself, for the purpose of
eeping herself warm, so as to be in a condition to reach
e chamber that she had hired, if her pains should in-
rease. After having waited a little while, she was seiz-
l all of a sudden with such violent chagrin and fright,
at she lost both the strength and courage to descend
d traverse the street in the dark. A prey to despair,
e fell upon her bed, and soon fainted. When she
me to herself, she found herself inundated with blood,
d saw a dead infant before her. Her first attention
as directed to the child; being assured that it was re-
ly dead, she sat down a few minutes to reflect on what
e should do, and, daylight appearing, she rose, enclos-
l the dead child, with the wet clothes, in a box, put her

chamber in order, and went again to bed. They sent for the hostess of whom she hired the chamber. This woman, who was satisfied with a small gratuity, without requiring any further information, recognized her when she saw her, and confirmed by oath this part of the recital. Mr. Pinkston and myself declared, that she appeared to us worthy of credit, and, at the same time, we proved to the jury that the circumstance of the lungs having floated, proved nothing against the young girl: she was pronounced innocent, and I had the satisfaction of believing, that she was really so.

"In similar occasions, we are but too prone to allow ourselves to be prejudiced; and when we see a manifest intention to conceal the birth of a child, we conclude that there was also a formal project to destroy it: we weigh all the circumstances on this hazardous supposition. If it was not thus, we say, why has the mother acted in such or such a manner? Why has she not done differently? Such questions would have an appearance of equity, and we could draw solid conclusions from them, if the accused, at the time, took counsel from a calm and disinterested mind; but when we reflect that she is violently agitated by the conflict of passions and fears, the more unreasonable her conduct may be, the more natural it ought to be considered."

In the remainder of his letter, Mr. Hunter proves that it is very difficult to judge with certainty, from the inspection of the body of a new-born infant, whether the death was natural or violent. He adds, that frequently natural accidents, such as the swollen state of the head, the dark or very red color of the face, the circumstance of the lungs floating in water, &c., are taken for signs of violent death. "If an infant breathes once, and instantly dies, the lungs will swim in water as readily as if it had breathed longer, and had then been strangled. A child will very commonly breathe as soon as its mouth is born, or protruded from the mother, and, in that case," says Hunter, "may lose its life before its body be born:

especially when there happens to be a considerable interval of time, between what we may call the birth of the head and that of the body. And if this may happen when the best assistance is at hand, it is still more likely to be the case, where there is none, that is, where the woman is delivered by herself."

"We frequently see new-born infants," continues this distinguished physician, "who, from circumstances in their constitution, or, in the nature of the labor, are but barely alive; and, after breathing a minute or two, die, in spite of all our attention; and why may not that misfortune happen to a woman who is brought to bed by herself?"

"Sometimes a child is born so feeble, that if left to itself, after breathing or sobbing, it might probably die, and yet may be roused to life by blowing into its lungs, applying warmth and volatiles, rubbing it, &c. But in the cases we have been considering, such means of saving life is not to be expected."

"When a woman is delivered by herself, a strong child may be born perfectly alive, and die in a very few minutes, for want of breath: either from being upon its face *dans l' arriere-faix* made by the natural discharges, or upon wet clothes, or by the wet things over it, collapsing and excluding air, or drawn close to its mouth and nose by the suction of breathing. An unhappy woman delivered by herself, distracted in her mind, and exhausted in her body, will not have strength or recollection enough to fly instantly to the relief of her child."

My readers will doubtless be struck with the equally sound and luminous manner in which Dr. Hunter has treated the question of infanticide. Still the importance of the subject is such, that I may be excused for permitting myself some further remarks dictated by my own convictions.

Infanticide, as Mr. Hunter agrees, ought to be punished as murder, when committed with premeditation, with mature reflection, in the complete enjoyment of moral liberty, without urgent temptation, solely as the result of an irregular life and abandoned character. In this case, we may thank the legislature for taking under its protection the deserted and defenceless infant.

It would seem, at the first glance, that the erection of foundling hospitals has, in some sort, provided for the preservation of the existence of these unfortunate beings. But will the mother always be in a condition to convey her new-born child to this establishment? Is not the reverse often the case? Is not a charitable mediator needed to carry the child to these houses? Or, has the mother always the courage to reveal her situation, which she would wish to hide from all the world? Foundling hospitals are, without doubt, of great service, and the evidence of this is found in the fact, that, in places where no such establishments exist, the prisons enclose a large number of mothers, guilty of infanticide. But hospitals do not provide for all contigencies. It is an error to imagine that it suffices to assure the mother respecting the maintenance of her offspring; it is not want which most tends to distract her. Very often it is shame, it is despair, which produces infanticide. Now the causes of this shame and this despair, are not destroyed by the institution of foundling hospitals.

We may assume, as a general principle, that a mother cannot feel either anger or hatred against her new-born infant. This principle would always be operative, if the mother in these circumstances always acted consistently; if, indeed, she retained the power to act thus when overwhelmed with utter humiliation. But, in this fatal moment, the mother thinks only of the ingratitude, the infidelity, the perfidy of the father of her child; he has deceived her in the most infamous manner; he has loaded her with shame, and plunged her into wretchedness; he has destroyed all her enjoyment of the present, all her hopes in the future; and, while he forgets her in the arms of another, the laws afford this injured woman no protection, no indemnity, against her seducer. The idea that all the artifices he has employed to betray confiding innocence, to seduce an inexperienced girl, are now regarded as subjects for mirth; this idea presents itself to every unfortunate who finds herself deserted; this injustice vexes, torments, revolts her. Her indignation goads her feelings, wears upon her mind, and may, in fine, drive her to distraction.

Infanticide awakens the idea of atrocious barbarity, because it is supposed, that the natural feeling of mothers must be aroused at its very name. Nature, it is true, has placed in most women, and in most of the females of animals, this beneficent propensity. But in women, as in the females of brutes, this propensity is not equally energetic in all individuals. Many domestic animals abandon, kill, or devour their young. Many cows will not let themselves be suckled by their calves; other cows, on the contrary, if separated from them, never cease to call them by lowing, and refuse to eat for several days. Unhappily, the same differences in maternal love are also remarked among women. All do not desire to become mothers; many fear to have children. There are even some, who regard pregnancy as the depth of misfortune. We daily observe in female domestics, that some are very fond of children, while others cannot bear them. Our readers, no doubt, are acquainted with women, who seek and find a thousand pretexts to avoid having their children near them. Observe, with attention, the effect produced by the death of a child on different mothers. Many, though delivered, by the loss of an illegitimate child, from shame, from misery, and from a thousand annoyances, yet shed tears for a long time afterwards at the recollection of the event. Other mothers, on the contrary, though subjected to none of these mortifications, see their lawful children buried, with a smile on their lips. If, then, there are women in whom the sentiment of maternal love is thus feeble, we cannot say that, in their case, infanticide differs in its degree of criminality, or, is more unnatural than any other premeditated murder.

We have examined the form of the head of twenty-nine infanticide women. Twenty-five had the organ of maternal love very feebly developed. True, it is not this organization which induces a mother to destroy her offspring; but a woman thus organized, has one internal motive the less, not to commit this crime; and, having to combat the impulse of the unhappy circumstances in which she finds herself, she will not make the resistance she would have done, had her internal feelings been strongly excited against the idea of such barbarity.

Almost all laws against infanticide suppose this crime to be premeditated, whenever it is not committed in a transport of anger or of hatred: but are these in truth the only affections, which are capable of excluding premeditation? Let us judge by some of the actions of our own sex. How often does a sentiment of honor, although misplaced, make us risk our life, and that of our fellow-men! How many young men, clever and full of talent, have taken their own life, in consequence of losing the object of their love! How frequently will disappointed ambition, or the loss of our fortune, throw us into despair! And yet we are, *par-excellence*, the firmer portion of the human race; we are never deprived of all support; our misfortunes are seldom incompatible with the hope of future enjoyment, and still more rarely do they take from us the prospect of a companion, a soother of our sorrows. How different is the position of a wretched woman, worn down by affliction! To feebler intellectual faculties, women usually unite a higher degree of sensibility; the lively affections and the passions take hold of them more easily, and bear them along with more violence. How many we see, who, even in the brightest days of their lives, lose their reason in consequence of the most trifling occurrences! The sentiment of honor and of shame is exercised, exalted, and rendered more lively in woman from her childhood; and we demand of these creatures thus sensitive to excess, of the young, timid, and inexperienced, to be cool, calm and considerate, when all that is most dreadful, and most discouraging, has but just overtaken them. The physical effects of pregnancy, the terrible and frightful play of all the passions, which torment them during its course, go to augment their irritability of feeling, and to distract their intellectual faculties. The decisive moment arrives; abandoned, without consolation, tortured with pain, weakened by the loss of blood, and bewildered by the confusion of the most terrible apprehensions, the unhappy mother extinguishes, with her own hands, the frail existence of her infant: perhaps she commits this very act in a moment of that real delirium, with which mothers, even the most happy, are sometimes attacked at the period of child-birth.

In a report of the counsel-general of hospitals at Paris, which includes ten years from 1804 to 1814, it is remarked, under the head of insane, that the number of those received at the Salpètriére, and the Bicêtre, was 2154 men, and 2804 women. Of this number of cases, 658 are placed to the account of child-birth, its consequences, and preceding circumstances, more or less distant. Among the women, 166 cases were owing to excessive and unfortunate attachments; while in men this cause contributed but 37.

The following very remarkable fact, related by M. Esquirol, proves that a woman may destroy her infant in the delirium consequent on confinement. "A woman was delivered at St. Cloud, killed her infant with twenty-six wounds from scissors, wrapped it in cloths, and threw it in the privy. As she went out every day at an early hour, and as on this day she was observed not to go abroad, the people went to her room and demanded her child; she could give no account of it. Search was made, and the child found as above stated. Being carried to Versailles, where she was to be tried, she would not allow them to bandage her eyes, in order to conceal from her the outrages of her town's-people who followed the coach: she repeatedly said, they will surely do me no mischief; is it not so? for what harm have I done? Having reached Versailles, she refused to eat the two first days. When brought to the bar, she confessed her crime, gave no reason for her justification, and alleged, that she knew not why she had done it. The judges, very wisely, declared her not guilty, the crime having been committed in a state of mental derangement. How many such unfortunate beings have been, and still are, the victims of a mistaken zeal for justice!"

Why cannot we, the rest of mankind, appreciate so deplorable a situation, and, in doing so, establish grades of extenuation in a crime, which may be aggravated or excused by so many circumstances? Why should so much difficulty be apprehended in demanding satisfaction from the seducer? Why fear to do justice upon a traitor? At least let us not fear to be indulgent and humane for feeble, frail, and injured innocence. The unfortunate, whose excess of misery and despair has unsettled her mind and broken her heart, is surely worthy of compassion, and does not deserve to be punished with that rigor, which the laws reserve for crimes deliberately planned.

To give an idea of the fatal combination of disastrous circumstances, which may lead a mother, though endowed with the good qualities of her sex, to destroy her child, I shall quote the following fact, inserted in the *Journal du Beau Monde*,* on occasion of our visit to the prison of Torgau.

Among a number of criminals detained in the prison of Torgau, who were brought to Dr. Gall, they presented to him a woman, aged between thirty and forty years. Deaf to the prayers of her infant, aged four years, she had drowned him in a river.

Dr. Gall examined her head: he took the hand of M. Soder, counsellor at Halle, who happened to be there, and passed it over the occiput and the sides of the head of the woman, in order to prepare him for some farther observations. The prisoner having retired, he explained to a crowd of persons who accompanied him, that he had discovered a circumstance very unusual in these cases, namely, that the prisoner had the organ of maternal love very greatly developed; that the organ of murder was very little so; that, otherwise, she was very well organized, and must have a very great facility for learning by heart. The magistrates present then related to Dr. Gall the following facts.

---

* August 1, 1805, No. 92, le Journal paraissait a Leipzig.

"This person, born of poor parents, whom she lost at an early period, had received almost no education at all; when grown up, she went to service in the country, and had the best certificates from her masters. Unhappily, she was seduced, became pregnant, and the being to whom she thus gave life, was the cause of her misery. She was dismissed from the house where she was then employed, and no one would receive her on account of her child; for a long time she knew not how she should maintain herself and this unfortunate creature, whom she cherished with all the affection of a tender mother, but whose existence was thus rendered a curse to her. At length a poor villager and his wife took pity on her lot, received the child in their house, and kept charge of it for three years. The mother found a place and behaved herself very well.

"The child grew up and gave great satisfaction to his protector, who loved him with the tenderness of a son, and was repaid with equal warmth. This was enough to set idle tongues busy with the rumor, that the villager was the parent of the child, whose mother obstinately refused to name the real father. The good man, conscious of his innocence, despised these calumnies; but his wife was differently affected by them. Hence resulted altercations so frequent and so disagreeable, that the villager, to obtain peace, sent back the child to his unhappy mother. In vain did she supplicate her employers; in vain represent that she had served them with exemplary assiduity and fidelity; she saw herself, on account of this child, again houseless in the severest season of the year. All the other rich peasants treated her with the same harshness; she met with no other poor and hospitable villager. She wandered from place to place, selling her wretched garments to satisfy her hunger and that of her child, finding no where either refuge or succor. The child was wasting away; overcome and enfeebled by hunger and pain, she implored death for this miserable being and herself, as the only relief to their sufferings. In this struggle between maternal love for her child, who was already dying of hunger and cold, and that voice from within, which plainly told her that the destruction of this child was the only means of saving herself; hopeless of compassion from mankind, in a moment of delirium she seized the boy, summoned all her strength, and, in the fear of seeing him slowly expire from inanition, carried him to the next river; deaf to his prayers, she threw him into the waves, where death soon released him from his sorrows. Exhausted by weakness, she now fainted, and was found in this state. She immediately accused herself of having destroyed her child, and was arrested.

" During her detention, while her trial was preparing, which lasted a year, she behaved in the most regular manner, expressed the deepest repentance for her act, which, however, she did not regard as a crime, and awaited her punishment with resignation. The clergyman, who visited her from time to time, reported that she had not received any kind of instruction, that she had not the least notion of religion, but that she seemed very docile, very attentive, and very gentle. The persons who watched her, gave an equally favorable account. These various motives induced the regency to soften the sentence, pronounced in the first instance by the tribunal at Leipsic, which condemned this unfortunate woman to be beheaded. This punishment was commuted for imprisonment for life in a prison where she was not treated with too much rigor, and where she was instructed in religion. She learned to read with extraordinary application and facility, and seized with readiness whatever was taught her; so that, besides the task imposed on her, which she readily performed, she learned by heart, so as to repeat verbatim and fluently, several spiritual songs, the catechism, and many chapters of the Bible. She is one of those prisoners who give the most satisfaction."

In the prison of Celle we examined another prisoner, guilty of infanticide. We found the organ of maternal love equally well developed in her. M. Bergk has inserted this history in his Recueil de causes Célèbres, tom. ii. This unhappy woman had, likewise, been urged, by the most pressing necessity, to destroy her child.

Truly, if it were not so painful to a mother to resolve on the commission of such an action, infanticide, the consequence of unlawful connections and of the perfidy of men, would be far more frequent. It may be conceived how great must be the violence of the impulse, which urges to such an action, when it is remembered, that the attachment of a mother to her offspring, often silenced during pregnancy, becomes singularly active and energetic during the period of child-birth. We must, then, suppose, that when a mother yields to this dreadful suggestion, she is almost always violently tempted to it, and that thus in the midst of the contradictory passions which agitate her, it is fair to examine, to what degree this struggle may have left her sufficient reflection, or even the full possession of her senses.*

---

* To prevent infanticide, it has in many countries been made the duty of girls, when pregnant, to disclose their situation to an accoucheur or a midwife; and if they do not comply with this form, the law suspects the intention of committing infanticide. In other places, the proprietor of the house where the girl dwells, is made responsible. Unhappily, the legislator often finds himself in the same position as the medical man when he treats incurable diseases. No means are successful, but still he prefers to try doubtful ones, rather than employ none. The temper of the law, which enjoins the avowal of pregnancy, is too much at variance with the character of a timid and bashful woman; it is evident that we do not here speak of prostitutes. The whole education of women tends to confirm this natural modesty. This sentiment is regarded as the best safeguard of their virtue; and yet when a woman yields to temptation, we expect her to reveal her shame! We have seen men of mature age, who could not resolve to make confidants even of their most intimate friends, in regard to certain diseases.

I have observed that both sexes experience every month, once or twice, a species of periodical derangement, which disturbs the harmony of their affections and their habits, and which assumes the character of an irritation and a melancholy, of which the individual affected can render no reason to himself. Persons of an irritable or enfeebled temperament, experience this derangement in a very sensible manner. I shall speak of it hereafter, more in detail. It will suffice here to remark, that this phenomenon takes place especially at the periods of regular evacuations. Now child-birth arrives at one of these periods; that is, at the time when the woman would have had her tenth menstrual evacuation; it follows, that all the circumstances which are capable of affecting and troubling a woman, then strike her mind with most force. It has generally been observed, that at this period women are more susceptible, more gloomy, more despondent, more easily excited. Is it then surprising, if they are more subject to estrangement, and more likely to adopt fatal resolutions? This same periodical derangement of the mind has sometimes, also, the most deplorable influence on men. We know an individual, who, once a month, is harassed for two or three days by the thought, and even the desire, of committing murder. This desire puts him in a state of anguish and despair; he then hastens to the house of a friend, and begs to be preserved from the misfortune which threatens him. The paroxysm passed, he returns home, delivered from all sort of temptation. It is during this period, that those who are visited with a propensity to suicide, generally put an end to their life.

If it be also considered that many girls believe, that, by making such a confession, they inflict disgrace on their family, and that this very obstinacy, in concealing their situation, is itself an evidence that their virtue is not wholly corrupted, it will be seen that it were better to have recourse to milder means, such as establishments where women can lie in privately, and to foundling hospitals, to which they might convey their infants, with the certainty of having their existence provided for.

I have treated at length of infanticide; but this is not the only example which shows, that prolonged passions and affections, even when they do not actually produce madness, may alter the dispositions of the soul, and so enfeeble moral liberty, that it is difficult, in such cases, to appreciate the culpability of actions. The following example furnishes a proof of this.

Other cases of Moral Liberty greatly weakened.

The wife of the honest Joseph Prohaska, soldier in garrison at Breslau, in Silesia, inspired a brutal passion in the first lieutenant of her husband's company. This virtuous wife rejected with perseverance the proposals and the importunities of the lieutenant, and said nothing on the subject to her husband. One day that she carried his dinner to the *corps-de-garde*, where she had been designedly sent, she found him sitting on the camp-bed, his face pale and wan, and his eyes fixed on vacancy. Take that away, said he, I have been sufficiently regaled at the exercise and parade ground, and have no appetite. He appointed her a meeting at seven in the evening, at the post. In the interim she learned, from one of the companions of her husband, that the lieutenant had accused him already, several times, at the exercise, of inattention to orders and neglect of his arms; that he had added some injurious expressions, and had repeatedly given him, with his own hands, blows with a cane; that when the battalion was formed, the colonel had, according to custom, ordered the officers to note the negligent soldiers, in order to give them twelve blows at the first pause. Prohaska had twice found himself among the soldiers noted for negligence, and had undergone the punishment prescribed; and, as the feeling of a man was roused within him, he complained with great gentleness, of the injustice done to him; he was treated as mutinous, and fifteen more blows forced him to silence.

The unhappy woman repeatedly interrupted this recital by exclaiming, "Jesus! it is I who am the cause of this; poor man, you must bear the consequence. He will then force me to this!" She returned home. To relieve her oppressed feelings, she related to her friends, and to the inhabitants of the same house, what had passed during this day, and her unfortunate connections with the ferocious tormentor of her husband. At seven, she went to the rampart where her husband awaited her. As soon as she was alone with him, she explained all that her natural goodness had till then induced her to keep secret, and begged him to go as soon as relieved from duty, and state his complaint to the colonel. Poor Prohaska heard her with apparent calmness. When she had finished, he silently took the supper she had brought him, and only opened his mouth to wish her good night, and entreat her to retire. The poor woman observing that her husband did not, as usual, give her the parting kiss, asked him if he was angry with her, or had any suspicion of her innocence. "No," replied he, "I do not complain of you. Yet you would have done better to have told me earlier the views of the lieutenant; we might now have been beyond the frontiers. At present this is not possible without running great risk as a deserter; for, I doubt not that, between this and to-morrow my pass will be taken from me." "It is taken already," said his wife, bursting into tears; "at half past three, the sergeant came to ask for it, saying, that they were going to change them all for new passes to prevent counterfeiting." "God help us, then," said Prohaska. He seized his wife, embraced her with transport, and let her depart. The poor woman repeated all these particulars to her friends, who made deposition of them at the time of the trial, of which Prohaska verified the accuracy.

The next day, it was a Friday, Prohaska returned from guard duty. He found the table laid, sat down with pretended tranquillity, and ate. A soldier who lodged with him, declared at the trial that this man had always been a kind husband and attentive father, but that these two qualities had never more strongly shown themselves, than from this Friday to the fatal moment, when, abandoned by his good angel, deceived by mistaken piety, and greatly weakened in mind and body, he yielded. Saturday, Prohaska worked all the morning.

After dinner, during which they said nothing on the subject of their troubles, he said in a low voice to his wife, it is useless to complain. A soldier of Major N's company, carried up some complaint, to-day, against an officer; he was right, but that did not prevent their giving him eighty blows on the back, simply covered with his shirt. I see it well; the life of a soldier is dreadful; henceforth I shall suffer in honor of God; he has himself suffered, and this may be imputed to me as a merit: I shall so manage as to have intercessors in heaven, who will pray for me, that my soul may not remain too long in purgatory. I wish to pardon him who has injured me: do you do the same. To-morrow we will confess, and receive the communion, that the heavenly bread may give more force to our resolution, and that I may not curse the wretch. He meant no doubt to speak of the first lieutenant, and he said nothing more on the subject. Both confessed themselves, and received the communion. To all appearances tranquillity was again established. Prohaska, at dinner, had wine brought him, in order, as he said, to regale himself a little. When he rose from table, there remained a little wine; he gave it to the other soldier and said, "Drink, comrade, and if I have ever injured you, pardon me." His wife asked him if he would take coffee. He thanked her, and proposed a walk. The unhappy wife consented, with pleasure, not suspecting that she was walking to her grave. They took the youngest of their children, and left the eldest in charge of their friends. The two crossed the town together, the wife carrying the child in her arms.

Prohaska, under pretext of avoiding the heat of the sun, led his wife under a grove of willows, planted along the glacis of the citadel. Having seated himself near a place called the mouse pond, Prohaska reminded his wife of nursing her child, who immediately fell asleep. She placed it on the grass, and covered it with a handkerchief. Then, Prohaska, wholly occupied with the idea of killing his wife, embraced her, hugged her with transport, kissed her, and asked if in truth she had that day made confession of all her sins without exception, experienced true repentance and absolution. She answered yes to all these questions. He pressed her again with his left hand: and while they interchanged the tenderest endearments, he gave her a stab with his right hand, which pierced her to the heart. He then let his wife fall gently on the grass, having thus sacrificed her to his religious delirium, and, as some convulsive movements seemed still to betray some remains of life, fearing that she might still be suffering pain, he, to shorten its duration, cut her throat. He contented himself with taking from the pocket of his wife, the key of the house; and, having washed his hands in the pond, and thrown away his knife, he took his infant, who was still sleeping, and returned home by another way. By his own confession, he ran very quickly, because he feared that if his wife's body were discovered, he should be suspected and arrested; which would have prevented him from snatching his two dear children from a perverse and wretched world, and sending them to heaven to serve as intercessors for him.

On returning home, he placed the infant in the cradle, still asleep. He then went in pursuit of his neighbors, begged the wife of the old messenger of the regency, to go out of the gate of Schweidnitz, and pointed out to her the place where she would find his wife; adding that he had left her well, but very weak, having been taken ill during the walk; that she had sat down to rest herself, and had begged him to return with the child. He ended by saying that he was too tired to go back himself. The good woman hastened to comply with his request, and would have taken the infant. This

Prohaska opposed, alleging that it would hinder her in her walk. No sooner is he left alone, than he runs with the infant to his house, where he had left the other asleep; splits the skull of both with a small hatchet; places them on the bed in each other's arms; and, having carefully shut the chamber, goes to the guard-room, and, with a certain satisfaction in his looks and gestures, says that he has killed his wife and children. "Now," added he, "let lieutenant de V. make love to her. She and my children are beyond seduction and dishonor; they will thank me for the happiness they enjoy, and will pray for me in heaven."

The counsel of war that tried him, paid no attention to the extenuating motives, and did not take them into consideration to determine the degree of culpability, with reference to moral freedom. It treated Prohaska, not as a deranged man, but as a man in health, as a man who had acted with perfectly free will, consequently, as an assassin with premeditation: it condemned him to be beheaded; and, to aggravate the punishment, refused him in prison, and even when he went to execution, the privilege of being accompanied and exhorted by a clergyman.*

This fact proves to what degree violent melancholy and superstition may obscure the mind, and extenuate the conduct of those unfortunate men, who, in this condition, commit crimes. But, how many other circumstances, hitherto little remarked, contribute to affect our reason, and, consequently, to impair our freedom!

Certain aliments, and especially spirituous liquors, produce on many persons peculiar irritations, which are the effect of a species of ebriety, though not accompanied with the ordinary symptoms of that state. We know that wine and brandy render a man courageous, quarrelsome, eloquent, sincere, amorous, sad, or gay. When the robber Peter Petri was sober, he seemed plunged in a state of dulness and apathy. They could then do what they would with him. But, after drinking a few glasses of brandy, he was a very tiger, who threw himself without distinction upon friends and enemies. A woman at Bamberg, whenever she had drank brandy, felt a strong desire to set fire to some house; but no sooner had the excitement passed, than this woman was filled with horror at her own previous state. As, however, she was not always on her guard against the enticements of her favorite beverage, she actually committed arson in fourteen instances.

---

* This fact was communicated to us by Major Grambkowski, who terminates his narrative in these words: "I abstain from any comment, but I warrant the truth of what I relate."

The most embarrassing case in regard to culpability, without reference to the laws, is that in which a peculiar quality acquires by itself, and in consequence of the organization, so great a degree of energy, that it forms the ruling passion of an individual. I have already shown, that all the faculties, and all the propensities, may arrive at this degree of energy. If this takes place in regard to a matter, which is indifferent or laudable, we may felicitate the individual, without making it a subject of commendation. Many persons are naturally inclined to devotion ; others would be forced to do great violence to their nature, if they dismissed, without aid, an abandoned child, or a friendless old man. Many men have an especial inclination for building, travelling, disputing; one is inflamed with an insatiable desire of glory; another cannot spare his best friends, when a brilliant sarcasm rises in his mind. We found in a house of correction a young nobleman extremely proud, who was confined there, because he was ashamed of every kind of work. Even there he would only condescend to speak to persons of distinction, and his questions discovered uncommon penetration. The nervous systems of certain external senses may also acquire such an extraordinary degree of activity and energy, that they determine, as it were, the principal character of an individual. This kind of energy is even sometimes hereditary. In a certain Russian family, the father and the grandfather early became victims of their propensity to drunkenness; the son, though he foresaw the consequences of this perverse habit, continued to abandon himself to it, in spite of his exertions; and the grandson, a boy of five years, at the time of the publication of the first edition of this work, already manifested a decided propensity for spirituous liquors.

Why should not this imperious activity sometimes take place, also, in other organs, which, by the excess of their action, lead to evil? The reality of such exaltation is proved by so many examples, that any objection dictated by prejudice or superstition, would be absurd. The individual who experiences this exalted energy, is governed by a single sensation or idea, in which his whole soul is centered. If this violent action is not controlled by some superior force, the man becomes its slave. If faculties of a superior order act at the same time in a contrary direction, there hence results an obstinate struggle between the unhappy propensities of the individual and the painful opposition of his reason. Is it, then, surprising, that evil propensities often gain the mastery over the good; the flesh, over the spirit? This state, it is true, is not a real alienation of the mind; it is rather a partial exaltation, a subjection of the soul, and it offers an incomprehensible contrast between man and the animal in man.* If the exaltation takes place in a quality, whose too energetic activity leads to criminal acts, a state can hardly be imagined more unhappy for the individual, and more perplexing to the judge; for this state produces effects in appearance so contrary, that, on the one hand, it is scarcely possible to distinguish it from the state of reason; and, on the other, it seems to confound itself with madness. Let us examine some of these inclinations, beginning with the propensity to theft.

---

* "The flesh lusteth against the spirit, and the spirit against the flesh and these two are contrary the one to the other, so that ye cannot do; the things that ye would." St. Paul to Gal. ch. v. ver. 17.

Violent Propensity to the commission of Theft, destroying the Moral Freedom.

Victor Amadeus I., King of Sardinia, was in the constant habit of stealing trifles. Saurin, pastor at Geneva, though possessing the strongest principles of reason and religion, frequently yielded to the propensity to steal. Another individual was, from early youth, a victim to this inclination. He entered the military service, on purpose that he might be restrained by the severity of the discipline; but, having continued his practices, he was on the point of being condemned to be hanged. Ever seeking to combat his ruling passion, he studied theology, and became a capuchin. But his propensity followed him even to the cloister. Here, however, as he found only trifles to tempt him, he indulged himself in his strange fancy with less scruple. He seized scissors, candlesticks, snuffers, cups, goblets, and conveyed them to his cell. An agent of the government at Vienna had the singular mania for stealing nothing but kitchen utensils. He hired two rooms as a place of deposit; he did not sell, and made no use of them. The wife of the famous physician Gaubius had such a propensity to rob, that when she made a purchase, she always sought to to take something. Countesses M., at Wesel, and P., at Frankfort, also had this propensity. Madame de W. had been educated with peculiar care. Her wit and talents secured her a distinguished place in society. But neither her education nor her fortune saved her from the most decided propensity to theft. Lavater* speaks of a physician, who never left the room of his patients without robbing them of something, and who never thought of the matter afterward. In the evening his wife used to examine his pockets; she there found keys, scissors, thimbles, knives, spoons, buckles, cases, and sent them to their respective owners. Moritz, in his experimental treatise on the soul, relates with the greatest minuteness the history of a robber, who had the propensity to theft in such a degree, that, being "in articulo mortis," at the point of death, he stole the snuff-box of his confessor. Doctor Bernard, physician of his majesty the king of Bavaria, speaks of an Alsatian of his acquaintance, who was always committing thefts, though he had every thing in abundance, and was not avaricious. He had been educated with care, and his vicious propensity had repeatedly exposed him to punishment. His father had him enlisted as a soldier, but even this measure failed to correct him. He committed some considerable thefts, and was condemned to be hanged. The son of a distinguished literary man offers us a similar example. He was distinguished among all his comrades for his talents; but, from his early infancy, he robbed his parents, sister, domestics, comrades, and professors. He stole the most valuable books from his father's library. Every kind of means was tried to correct him: he was sent into the service, and underwent several times the most rigorous punishments; but all was useless. The conduct of this unhappy young man was regular in all other respects; he did not justify his thefts; but, if they addressed to him on this subject the most earnest and the most amicable representations, he remained indifferent; he seemed not to understand them. The almoner of a regiment of Prussian cuirassiers, a man otherwise well educated and endowed with moral qualities, had so decided a propensity to theft, that frequently on the parade he robbed the officers of their handkerchiefs. His general esteemed him highly; but as soon as he appeared, they shut every thing up with the greatest care, for he had often carried away handkerchiefs, shirts, and even stockings belonging to the women. When he was asked for what he had taken, he always returned it cheerfully. M. Kneisler, director of the prison at Prague, once spoke to us of the wife of a rich shopkeeper, who continually robbed her husband in the most ingenious manner. It was found necessary to confine her in gaol; but she had no sooner escaped than she robbed again, and was shut up for the second time. Being set at liberty, new thefts caused her to be condemned to a third detention longer than the preceding. She even robbed in the prison. She had contrived, with great skill, an opening in a stove which warmed the room where the money-box of the establishment was placed. The repeated depredations she committed on it were observed. They attached bells to the doors and windows to discover her, but in vain; at length, by the discharge of pistols which went off the moment she touched the box, she was so much terrified, that she had not time to escape by the stove. We have seen in a prison at Copenhagen an incorrigible thief, who sometimes distributed his gains to the poor. In another place a thief, shut up for the seventh time, assured us with sorrow, that it did not seem possible to him to conduct otherwise. He eagerly begged to be retained in prison, and to be furnished with the means of gaining his living.

---

* Physiognomie, Edit. de la Haye. t. ii. p. 169.

I might cite thousands of similar facts, which prove, at the same time, that the propensity to theft is not always the consequence of a bad education, of idleness, of poverty, of the want of certain good qualities, nor even of the want of morality and religion; and this is so true, that every one shuts his eyes on trifling larcenies when committed by rich people, who are otherwise of good character. These thefts are imputed to absence of mind. But may not the same propensity be found in the poor? and does it then change its character? Is its nature altered by the value of the thing stolen? It follows, from these cases, that it requires great prudence and experience to fix, with exactness, the degree of criminality.

Let us now consider, under the same point of view, another mischievous propensity.

Excessive Propensity to kill, enfeebling Moral Liberty.

There is in man an inclination, which varies in degree, from simple indifference at seeing animals suffer, and from simple pleasure at witnessing the destruction of life, to the most imperious desire of killing. Our sensibility revolts at this doctrine, but it is, nevertheless, only too true. Whoever would judge justly the phenomena of nature, must have the courage to acknowledge things as they are, and, in general, not to make man better than he is.

We observe that, among children as among adults, among coarse people as well as those who have received education, some are sensitive and others indifferent to the sufferings of their fellows. Some even find pleasure in tormenting animals, in seeing them tortured, and in killing them, without our being able to charge it either to habit, or to defect of education. I could cite several instances, in which this inclination, when very energetic, has decided individuals in their choice of employment. A student used to shock his companions by the particular pleasure he took in tormenting insects, birds, and other animals. It was to satisfy this propensity, as he himself said, that he made himself a surgeon. An apothecary's boy experienced such a violent propensity to kill, that he took up the trade of a hangman. The son of a shopkeeper, whose mind took the same turn, embraced that of a butcher. A rich Dutchman used to pay the butchers, who made large contracts for supplying vessels with beef, to let him kill the cattle.

We may also judge of the existence of this propensity and of its diversity, by the impression produced on spectators by the punishment to which criminals are subjected. Some cannot support the spectacle; others seek it as an amusement. The Chevalier Selwyn made particular exertions to be placed near the criminal who was undergoing punishment. They relate an anecdote of La Condamine, that, one day, making efforts to penetrate the crowd assembled at the place of execution, and being repulsed by the soldiers, the executioner exclaimed, "Let the gentleman pass, he is an amateur." M. Bruggmanns, professor at Leyden, mentioned to us a Dutch clergyman, who had so decided a desire for killing, and for witnessing death, that he took the place of almoner of a regiment, solely to have an opportunity of seeing a great number of men destroyed. This same individual raised, at his house, the females of various domestic animals, and when they brought forth young, his favorite occupation was to cut their throats. He used to take charge of killing all the animals that were to be cooked. He corresponded with the executioners throughout the country, and would travel several miles on foot, to be present at executions; so that the executioners always secured to him the distinction of a place near them. On the field of battle we find striking examples of the different degree in which this disposition exists. One soldier, at the view of the blood which he causes to flow, feels the intoxication of carnage; another, moved by pity, inflicts feeble blows, or at least spares the conquered; turns away at the sight of a child, of a woman, and of an old man, and checks himself after a victory.

The man enslaved by the cruel propensity of which I here speak, still preserves the power of subduing, or of giving it a direction which is not injurious. But the power of subduing a vicious propensity is weakened in such an individual, in proportion as he has received less education, or the organs of the qualities of a superior order are less developed. If it happens that this propensity is carried to the highest degree, the man experiences but little opposition between his pernicious propensities and his external duties; and though even in this case he is not deprived of moral liberty, or the faculty of being determined by motives, he still finds pleasure in homicide. I shall include in this case all the robbers, who, not content with plunder, have shown the sanguinary inclination to torment and kill without necessity. John Rosbeck was not satisfied, like his companions, with ill treating his victims to make them confess the place where their treasures were concealed; he invented and exercised the most atrocious cruelties, for the sole pleasure of seeing the sufferings and the blood of children, women, and old men. His first imprisonment continued nineteen months; he was shut up in a subterranean dungeon so narrow, that he could hardly breathe. His feet were loaded with chains; he was up to the ankles in dirty water; and when he was taken from this sink, it was to undergo cruel torture. Still he would confess nothing; he was set at liberty, and the first use he made of his freedom, was to commit a robbery in open day. He soon committed new murders, and was finally put to death. At the beginning of the last century, several murders were committed in Holland, on the frontiers of the country of Cleves. The author of these crimes was a long time unknown. Finally, an old minstrel, who used to go to play the violin at all the weddings in the neighborhood, was suspected from some conversation among his children. Carried before the magistrate, he confessed thirty-four distinct murders, and asserted that he had committed them without malice, and without any intention to rob, solely because he found extraordinary pleasure in them. This fact was communicated to us by M. Serrurier, magistrate at Amsterdam.

The well-known Sabatino, condemned at Palermo, for various crimes, at the moment he ascended the scaffold, confessed that he had killed a man with a musket-shot two years before. When asked what could have induced him to commit such an outrage, he coolly replied, that he had fired his musket on the man, to satisfy himself that the powder was good! Journal des Maires, Saturday, Sep. 19, 1818.

Louis XV., says M. Lacratelle,* had a well-founded aversion to the brother of the duke de Bourbon Condé, the Count de Charolais, a prince who would have revived all the crimes of Nero, if, to the misfortune of mankind, he had been permitted to occupy a throne. Even in the sports of his childhood, he manifested an instinct of cruelty which might make one shudder. He amused himself in torturing animals: his violence to his servants was absolutely ferocious. They pretend that he tried to mingle cruelty even with his debaucheries, and that he practised divers barbarities on the very courtezans who were brought to him. The popular tradition, confirmed by several records, accuses him of several homicides. He committed murder, as is said, without interest, resentment, anger. He used to fire at bricklayers, in order to enjoy the barbarous pleasure of seeing them fall from the top of the houses, on which they worked.

These last facts, fortunately very rare, show us that this detestable propensity is sometimes altogether independent of education, of examples of seduction or habit, and that it has its source solely in a bad organization. In fact, there are sometimes committed crimes so barbarous, with circumstances so revolting and disgusting, that it would be difficult to explain them in any other manner. Prochaska† relates that a woman of Milan used to lure children to her house by flatteries, kill them, salt their flesh, and devour them daily. He also cites the example of a man, who, in the indulgence of this atrocious propensity, killed a traveller and a young girl, to devour them. I have already mentioned the daughter of a cannibal, who, though educated at a distance from him, partook, from an early age, of this savage passion.

---

* Historie de France, tom. ii. p. 59.

† Opera Minora, tom. ii. p. 98.

We cannot deny, then, that certain individuals have propensities to crimes, and even to those of the most atrocious character. Helvetius himself, the great antagonist of the innateness of the qualities of the mind and soul, is obliged to allow "that there are men so unfortunately constituted, as never to be happy but in doing deeds which will send them to the gallows." Cardinal Polignac,* also speaks of men "born vicious, for whom crime has actual charms, and who are borne along by a furious passion, which obstacles only irritate." †

Thus far, however, the propensities of which I speak are not of the number of those, which evince an actual alienation. These propensities render the most energetic measures necessary, and criminals of this description cannot be tolerated in society. The greater part, according to the expression of M. de Sonnenfels, "ought to be slain, as we slay wild beasts, to prevent their destroying the human race." ‡

It has been objected to me, that these persons ought not be judged by their organization. It is not pretended that they should be. But it is desirable to prove the reality of these facts, and to explain them by this perverse organization, that people may cease to accuse the voluntary perversity of these monsters.

Let us quit this painful subject, to notice those cases in which we may pronounce with confidence on the absence of moral liberty, and, consequently, the impossibility of admitting moral guilt, or any kind of responsibility. Such are those cases, in which illegal actions may be considered as done from imbecility of mind, mental alienation, or certain derangements of the natural state of health.

It will, perhaps be said, that the acts of imbecile or deranged persons are not subject to the operation of criminal laws. But my researches on this subject will throw great light on the preceding discussion; and, on the other hand, it appears to me essential to determine with the greatest precision, the circumstances in which one of the cases mentioned really occurs. I shall treat separately of each of these subjects.

---

* De l' Esprit, p. 578.

† Anti Lucrece, trad. par. M. de Bougainville, Louis, 1754, p. 184.

‡ Grundsætze der Policey, etc. t. 1.

Application of my Principles to illegal Acts which result from a peculiar weakness of the Mental Faculties.

I here make use of the expression, *peculiar weakness* of the mental faculties, because I am treating only of actions which are the consequence of a greater or less imbecility of mind. I shall not speak of acts which flow from complete and general stupidity of intellect. These last acts being purely involuntary or automatic, have not even the appearance of moral liberty, and can by no means, form the subject of my present researches.

Among the young boys who were brought to us in one of the prisons of Berlin, (Stadt-Vogtey,) there was one who particularly attracted our attention. We advised that he should not be set at liberty, because he would not be restrained from a continuance of his robberies. We added that the best thing which could be done, was to keep him always in a place of security. We communicated our reasons to those who accompanied us. They consulted the register, and found, to their great surprise, that this young boy had, from his earliest infancy, shown the most obstinate propensity to theft. Our adversaries availed themselves of this opportunity to place in the strongest light, what they were pleased to find frightful and dangerous in my doctrine. "To condemn," said they, "a young boy to perpetual imprisonment, because he has committed a theft, what can be more cruel or more revolting to humanity?"

What reason had we, then, to give this advice? I have already made evident that we ought to consider man in two points of view; first, as having qualities common with animals; that is to say, those of an inferior order; then as being endowed with the character of humanity, or with qualities of a superior order. I have also shown that man, by means of his superior qualities, is capable of subduing and directing his propensities of an inferior order. But, if the qualities of a superior order are controlled in an extraordinary manner, to such a degree that their free action is prevented, while those of the inferior order, on the contrary, are active, then the animal part of the man predominates exclusively, and the flesh, or the brutal desires, hold in subjection the spirit, or the dispositions of the superior qualities, which are hardly developed. With such an organization for those functions of the soul, which belong to a superior order, the same happens which takes place in regard to each organ whose development is defective; that is, there results a relative imbecility, and, in consequence, the incapacity of acting morally; while the propensities of an inferior order act with uncontrolled energy. Such an individual finds himself under an absolute necessity to act solely from the impulse of the passion which governs him; and his organization often places him in a worse state for self-government, than that of a well-organized animal. This imbecility does not always exclude other very active properties, which are common to animals, such as that of cunning; so that this same individual, even while abandoning himself to a guilty and irresistible inclination, seems, in this respect, to act with reflection and deliberation. It is thus, that the most stupid idiots, often find means the most ingenious to satisfy their brutal wantonness or their mischievous desires.

Such was the condition of the young robber of whom I have just spoken. The superior organs had but a defective development; that organ, on the contrary, whose too great activity leads to theft, had acquired a great degree of development and energy, and this mischievous quality was likewise seconded by the activity of cunning. This man was short and thick set; his forehead was very low, depressed back immediately above the eyebrows, very sloping laterally above the eyes, but broad and saliant towards the temples. His physiognomy announced no attention for reasonable subjects; nothing could be there discovered but cunning and malice. Was it, then, very difficult to conclude from the organization of this simpleton, that he must be incorrigible?

To make evident this species of imbecility, which excludes all moral liberty, I exhibit in my lectures the skull of an individual organized in the same manner. It was a young man of fifteen years, who died in the prisons at Vienna. From his infancy, he had constantly stolen, notwithstanding the severest punishments. His skull is ill formed, and announces a constitution originally rickety; one of the sides of the cranium projects before, the other behind. The forehead is low and depressed; the anterior lateral parts of the temples are large, but the total cranium is small. The reader may compare it in my large work, Pl. xxvi. with that of a man endowed with faculties of an elevated order, Pl. xxx. What benefit can be expected from punishments and houses of correction in regard to half-human beings like this? We saw in the prison of Berne, a boy of twelve years, ill organized and rickety, who could never prevent himself from stealing; with his own pockets full of bread, he still took that of others. At Haina, the overseers gave us a long account of an obstinate robber, named Fesselmayer, whom no corporal punishment could correct. In the prison he stole every thing he saw, and they had put on his arm a card which served as a mark of disgrace, warning others not to trust him. Before seeing him, we anticipated what his organization must be, and our expectation was confirmed at the very first glance. He appeared about sixteen years of age, though in fact he was twenty-six. His head was round, and about the size of a child of one year. This individual was also deaf and dumb, which often happens in cases of mental imbecility.

Thus, although we have nothing to hope from these imperfect beings, it does not follow that we have nothing to fear. On the contrary, it often happens that they are very dangerous, especially if they have the propensity to the sex, or that of killing in a high degree, so that the slightest cause will set these propensities in action. I have quoted, in the first volume of my large work, the example of a young man of fifteen years, who, in a brutal paroxysm of lasciviousness, so ill treated his sister, that she died in consequence. I also spoke of another idiot, who, after killing the two children of his brother, came laughing to tell him; of a third, who killed his brother, and wished to burn him for a funeral ceremony; finally, of a fourth, who, as Herder relates, having seen a hog killed, thought he might try it on a man, and actually cut his throat. We saw in prison a young man, whom no one regarded as simple, but who, without apparent motive, killed a child. They plied him in vain with questions, and with threats, to find what had led him to commit this act. He merely answered, and repeated without ceasing, that he had seen nothing but black: "Whoever," said he, with a lamentable voice, "was not there, cannot believe me, but God will pardon me." The forehead of this individual is very narrow and depressed, that is to say, low and flat; the top of his head, as in most epileptic idiots, is very high, and the occiput flat and compressed. There was in the prison of Friburg, in Brisgau, a young man of fifteen, half-simple, who had set fire to nine houses in succession. He used to assist in extinguishing the fire, and once saved a child, who was on the point of perishing in the flames. When the fire was over, he thought no more of it, which proves, that he acted only from animal instinct.

What happens to individuals with respect to theft, murder, and incendiarism, likewise takes place in other individuals, with respect to any other organ endowed with an extraordinary degree of activity. The quality dependent on this organ, then, acts in them mechanically at each impulse, without any reflection, and with very little consciousness. We have seen that the savage simpleton of Aveyron, had the singular propensity of putting every thing exactly in its place. Since we saw this savage, we have known a young man whom his parents were very unwilling to regard as simple, because, besides some intellectual faculties which he manifests, he has order remarkably developed. He is, however, simple in many respects. M. Pinel* speaks of an idiot woman, who had a decided irresistible propensity to imitate all that she saw done in her presence: she repeats, instinctively, whatever she hears, and imitates the gestures and actions of others, with the greatest fidelity, and without troubling herself with any regard to propriety. "We remark," says Fodéré† "that by an inexplicable singularity, several of this class of individuals possessed of such feeble intellect, are born with a peculiar talent for copying, drawing, for finding rhymes, and for music. I have known several, who have learned, by themselves, to play tolerably on the organ and the harpsichord; and others who understand, without having been taught, how to repair clocks, and to make some pieces of mechanism. This, probably, depends on the more perfect organization of the organ with which such an act is connected, and not on the understanding; for these individuals not only could not read the books which treated of the principles of their art, but they were confounded if spoken to on the subject, and never improved themselves." We knew a young girl, idiotic to a great degree, who sings with great propriety, and always follows the tone and the measure.

These examples prove that the talents in question may exist separately; that a particular propensity or talent, results from the peculiar activity of an organ, and that there may exist great activity in one organ, while, in regard to other organs, there is actual imbecility.

---

* Sur l'alienation mentale, 2d edit. Paris, 1809, p. 99.
† Traité du gôitre et du cretinisme, Paris, 1800, p. 133.

For the rest, this state having various degrees, we cannot affirm that, for beings so badly organized, all means of correction will always be fruitless. Lavater, however, regards these individuals as incorrigible, and it is in the front that he places the signs of their incorrigibleness. "The short foreheads," says he, "wrinkled, knotty, irregular, deep on one side, slanting, or that always incline different ways, will never be a recommendation to me, and will never gain my friendship. While your brother, your friend, or your enemy, while man, though that man were a malefactor, presents you a well-proportioned and open forehead, do not despair of him, he is still susceptible of amendment." It will be seen that Lavater had noticed the phenomena which I have described, and of which I have cited numerous examples. My doctrine alone gives their true solutions. It would be impossible to explain partial and incomplete imbecility, did we not recognize the fact, that the different properties of the soul and mind have each their different organs, and that the manifestation of these properties depends on the organization.

Though these partially imbecile individuals are not moral beings, nor consequently, punishable, the care of watching them no less pertains to the police, and it is indispensable to separate from social commerce, all kinds of weak-minded persons, in whom strong indications of evil dispositions are perceived.

Application of my Principles to illegal Actions, which are the consequence of Mental Alienation.

Mental alienation is either general, when the functions of all the faculties of the soul and mind are disturbed,—or partial, when this derangement takes place only in one or several of the organs. Mental alienation, whether general or partial, may be either continued or intermittent.

General alienation, when continued or permanent, manifests itself in a manner so evident, that there is no room for mistake as to its existence. We thus run no risk of regarding the actions committed in this state, as done with moral liberty, and, consequently, of rendering their authors responsible.

It is only to this species of alienation that the definition given by Locke belongs, who says that madness consists in a derangement of the judgment and the reason. Other writers call mental alienation, the state, in which one is not conscious of his own actions. But this definition is evidently false; for, this absence of self-consciousness cannot be proved in any species of mental alienation. If it be said that the individual, when restored to sanity, has no recollection of his late madness, I answer, first, that this failure of memory is not uniform; and, secondly, that this want of recollection does not prove that consciousness does not exist at the moment of alienation. I make it a point to rectify these defective or erroneous notions, because they lead us to pass false judgments on several actions. They suppose the culpability of actions, which, when examined with more attention, ought only to be regarded as the consequences of real alienation.

But if I say that there is mental alienation, when the ideas or sensations, either generally or partially, are at variance with the laws of the functions of a regular organization, and with the actual state of external things, this definition applies to all species of alienation; and while it indicates that the individual imagines things which are not, or represents things to himself differently from what they are, it justifies the use of the expressions, *mental aberration and alienation.*

I have already said that general permanent alienation cannot be mistaken. But the case is very different when general alienation is periodical, and when the paroxysms, after having ceased entirely, recur, either at irregular periods, or after a fixed interval, or when it is limited to certain qualities in particular, especially when this partial alienation completely disappears from time to time, and recurs, sometimes periodically, sometimes irregularly. Several moral qualities or intellectual faculties experience no derangement during the paroxysm of partial alienation ; and in this, as well as in the general intermittent alienation, the lucid intervals manifest no trace of aberration. Neither is partial alienation always a consequence of the derangement of the intellectual faculties: oftentimes the propensities or the moral sentiments alone suffer, and the mind or intellectual faculties remain perfectly sane. These various considerations render it very difficult to pass judgment correctly on the innocence or the guilt of equivocal actions. I shall, consequently, add some new views on the natural history of mental alienation, considered in its relation to medicine, to jurisprudence, and to legislation.

To enable my readers the better to understand the nature of mental alienation, I shall compare it with other known maladies. Every one knows, that, in intermittent fevers, in attacks of epilepsy, and in many other maladies, the health seems to be perfect as soon as the paroxysm has passed. It is also known, that, if the disease has a regular course, the paroxysms manifest themselves under their true form. But, frequently, the primitive and ordinary symptoms of the same disease change so much, that it declares itself under a form altogether different. Thus an intermittent fever shows itself sometimes under the guise of a simple stitch in the side, or of a simple tooth-ache. The mask which the disease then assumes, does not change its nature ; it demands the same treatment which we employ to cure it, when it appears under its habitual form.

On the other hand, each viscus in particular may be diseased, while the others remain sound. Each sense in particular may be deranged in function, while the functions of the remainder continue to be exercised without difficulty.

Mental alienation is likewise subjected to the laws of organization. Sometimes its attack is intermittent, and in this case, the paroxysm having terminated, it might be thought that the health of the subject was not at all impaired; at other times the intermittent alienations present themselves under appearances wholly different. Certain periods of development, the approach of certain accidental or periodical evacuations, the difference of ages, the influence of seasons, of temperature, of food, of the place of residence, of the state of the mind; all the causes, in fact, which determine the crisis, may produce the most considerable differences in the form and in the symptoms of the paroxysms, according as these causes are variously modified. The individual, who, in preceding paroxysms, seemed a fury let loose, may, in the following one, devote all his time to the exercises of the most fervent piety; and he, who, to-day, gives himself to the excesses of the most noisy enjoyment, may, to-morrow, be plunged in the deepest melancholy.

Each organ of the qualities of the mind, and, consequently, each faculty of the mind and soul, may also experience derangement, while the rest continue to act in their natural order. In this case, such or such a sensation or idea, alone varies from the natural laws; and, according as this state, is permanent or intermittent, we may say that the man has a fixed permanent or intermittent idea, or a fixed permanent or intermittent sensation or inclination. We easily conceive, then, why in a state of real alienation, the intellectual faculties of a superior order, such as memory, judgment, imagination, often remain untouched, and why the definition, which Locke has given of alienation, is suited only to general derangement and not to partial.

In order to enable my readers to judge of the cases in which a man, in relation to his illegal actions, ought to be regarded as really insane, I shall take into consideration first, intermittent alienations, during the paroxysms of which certain faculties manifest themselves with great energy; second, partial alienations; third, the alienations called reasoning ones; fourth, the alienations accompanied with visions; fifth, the alienations which lead their subjects to attempt the lives of their friends, of their children, or of other persons who have not offended them.

Of intermittent Alienations, during the access of which certain Faculties, or certain Propensities manifest themselves with great energy.

Some madmen, whose malady is intermittent, manifest, during their paroxysms, a peculiar energy in certain moral or intellectual faculties. This is proved by the following examples. M. Pinel[*] speaks of a madman, who, at all other periods, and in his long intervals of tranquillity, was only an ordinary man; but who, in his paroxysms, discoursed on the events of the revolution with all the force, dignity, and purity of language which could have been expected from the most accomplished scholar, and from the soundest judgment. The same author repeats[†] from Perfect, that a young person of very delicate constitution, and subject to nervous affections, had become insane; and that, in her ravings, she expressed herself with facility in very harmonious English verses, though she had never before shown any sort of disposition for poetry. Van Swieten relates that a woman, during her paroxysms of mania, showed a rare facility of versification, though, till then, she had been solely occupied in manual labor, and her understanding had never been improved by cultivation.

The facts given, thus far, exhibit only a more energetic manifestation of certain faculties for things, in themselves indifferent; but other examples show, that madmen may also experience a great degree of irritation in their mischievous qualities. M. Pinel[‡] repeatedly observed that men, who were very sober in the calm intervals of their periodical mania, gave themselves up to an irresistible propensity to drunkenness on a return of the paroxysms; that others, in the same circumstances, could not abstain from stealing and committing all sorts of roguery, whereas, in their lucid intervals, they were cited as models of probity; that mild and benevolent characters were changed, in consequence of insanity, into turbulent spirits, quarrelsome, and sometimes wholly unsocial. He speaks* of a man affected with very inveterate periodical mania. His paroxysms ordinarily continued from six to eight days of each month, and offered the most striking contrast to the natural state of the same individual. During his lucid intervals, his physiognomy is calm, his air mild and reserved, his answers modest, and full of propriety; he shows urbanity in his manners, a severe probity, the desire of obliging others, and expresses an ardent desire of being cured of his malady; but at the return of the paroxysm, which is especially marked with a certain redness of the face, by an intense heat in the head, and by burning thirst, his gait is hasty, the tone of his voice bold and arrogant, his looks full of menace, and he experiences the most violent propensity to provoke all who approach him, to irritate them, and to contend with them to the last. Another madman, says M. Pinel, of a mild and peaceful character, seemed, during his paroxysms, to be inspired with the demon of malice. His mischievous activity had no rest; he shut up his companions in their cells, provoked and struck them, and, on all occasions, raised subjects for quarrels.

---

[*] L. c. p. 110.

[†] L. c. p. 112.

[‡] L. c. p. 120.

Of Partial Alienations.

Nothing is more common in insane hospitals, than to see individuals insane with respect to a single idea, or a single propensity, and sensible in all other respects. One of these madmen so imposed on a magistrate who was visiting the hospital at Bicêtre, and succeeded so well in persuading him that he was a victim of the cupidity and cruelty of his relations, that the magistrate had serious thoughts of examining his complaints and of setting the injured man at liberty. But, just as he was bidding the madman farewell, promising to return shortly with good tidings, " Your excellency," said he, " will always be welcome, except on Saturday; for, on that day, the Holy Virgin makes me a visit." A commissary came to Bicêtre to set at liberty those who were considered as cured. He questioned an old vine-dresser, who allowed no incoherent expression to escape him in his answers. The statement of his condition is prepared, and, according to custom, given him to sign. What was the surprise of the magistrate to find the madman give himself the title of Christ, and indulge all the fancies suggested by this idea.* A goldsmith imagined that his head had been changed. He also thought he had discovered the perpetual motion. Tools were given him, and he went to work with the greatest activity. He did not discover the perpetual motion, but he made the most ingenious machines, implying profound reflection, and the most just combinations. We often see individuals, sensible in other respects, who believe themselves, one to be a general, another a minister or monarch, another God himself. All works on alienation contain a number of these examples. It is sufficient for me to remind my readers, that there are partial alienations, with respect to malevolent propensities, which lead to illegal actions, as there are with respect to the other faculties. The evidence of this may be found in several of the examples which I have cited, and in others, which I shall relate hereafter.

---

* L. c. p. 101.

---

* Pinel sur la alien. v. ed. p. 164.

Of the Reasoning Alienations.

We give the name to those cases, in which the insane individuals are really reasonable in all which does not concern their disease, and in which, even in regard to the alienation, they act in the most consistent manner, and with consciousness. A person whose intellectual faculties were generally sane, believed herself possessed of a demon; she yielded, however, to the urgency of her father, who entreated her to consult me as to her disease. She declared that she had consented to this only from filial duty, and added, wish a smiling and confident air, that it was useless for me to give myself the trouble to ask her so many questions; that her disease could not be natural, since so many physicians who had promised to relieve her, could not succeed. As she answered very pertinently to whatever was said to her, I tried by all sorts of reasoning to make her change her opinion. But she persisted in her mode of answering with the same consistency which she would have shown, had her state not been imaginary. She expected, absolutely, nothing from the aid of men, and had recourse only to prayer.

In this *reasoning* madness it is likewise possible, that the propensities may become injurious by too great a degree of energy. Madmen of this species answer questions with precision and accuracy; we observe no disorder in their ideas; they employ themselves in reading and writing, and engage in conversation, as if their moral and intellectual faculties were perfectly sound. Yet, at the same time, they will tear in pieces their clothes and bed-linen, and they have their fixed ideas and desires. But, although such madmen act in as consistent a manner as if they were sane, and, in all other respects, are reasonable, they are not the less mad as respects the illegal act. Some examples will set this matter beyond doubt.

At Berlin, M. Mayer, surgeon of a regiment, showed us, in presence of M. M. Heim, Finney, Hufeland, Goergue, and others, a soldier in whom sorrow for the loss of a wife whom he tenderly loved, had greatly enfeebled the physical powers, and induced excessive irritability. At length, he had every month an attack of violent convulsions. He was sensible of their approach, and as he felt, by degrees, a violent propensity to kill, in proportion as the paroxysm was on the point of commencing, he was earnest in his entreaties to be loaded with chains. At the end of some days the paroxysm and the fatal propensity diminished, and he himself fixed the period, at which they might without danger set him at liberty. At Haina, we saw a man, who, at certain periods, felt an irresistible desire to injure others. He knew this unhappy propensity, and had himself kept in chains till he perceived that it was safe to liberate him. An individual of melancholic temperament was present at the execution of a criminal. The sight caused him such violent emotion, that he at once felt himself seized with an irresistible desire to kill, while at the same time he entertained the utmost horror at the commission of the crime. He depicted his deplorable state, weeping bitterly, and in extreme perplexity. He beat his head, wrung his hands, remonstrated with himself, begged his friends to save themselves, and thanked them for the resistance they made to him. M. Pinel has also observed, that in furious madmen there is often no disorder of the mental faculties. Hence he likewise declares himself against the definition which Locke has given of mental alienation. He speaks of an individual whose mania was periodical, and whose paroxysms were regularly renewed after an interval of several months. "Their attack was announced," says he, "by the sense of a burning heat in the interior of the abdomen, then in the chest, and finally in the face; then redness of the cheeks, an inflamed aspect, a strong distension of the veins and arteries of the head; then fury, which led him, with irresistible propensity, to seize some weapon, and kill the first person who came in his way, while, as he said, he constantly experienced an internal contest between the ferocious impulse of his destructive instinct, and the deep horror inspired by the fear of crime.—There was no evidence of wildness in the memory, imagination, or judgment. He avowed to me, during his close confinement, that his propensity to commit murder was absolutely forced and involuntary; that his wife, notwithstanding his affection for her, had been on the point of becoming its victim, and that he had only had time to warn her to take to flight. All his lucid intervals brought back the same melancholy reflections, the same expression of remorse; and he had conceived such a disgust for life, that he had several times sought, by a final act, to terminate its course. What reason, said he, should I have to murder the superintendent of the hospital, who treats us with so much humanity? Yet, in my moments of fury, I think only of rushing on him, as well as the rest, and burying my dagger in his bosom. It is this unhappy and irresistible propensity which reduces me to despair, and which has made me attempt the destruction of my own life.* Another madman experienced paroxysms of rage, which were periodically renewed for six months of the year. The patient himself felt the decline of the symptoms toward the end of the paroxysms, and the precise period when they could without danger restore him his liberty, in the interior of the hospital. He himself requested to have his deliverance deferred, if he felt that he could not yet govern the blind impulse which led him to acts of the greatest violence. He confessed, in his calm intervals, that, while the paroxysm continued, it was impossible for him to repress his fury; and then, if any one appeared before him, he imagined that he saw the blood flowing from that man's veins, and experienced an irresistible desire to taste it, and to tear his limbs with his teeth, to render the suction easier.* We see that these examples refer themselves at once to what I have said of reasoning madness, of excitement, and of the manifestation of malevolent propensities. and of partial alienation.

---

* L. c. p. 102.

In reasoning madness, the subjects know their situation, and judge with accuracy of the disorder which reigns in their propensities, sensations, and ideas; they even experience remorse, immediately after the malevolent action. "A young mad woman," says M. Pinel,† "experiences every morning the access of maniacal delirium, which leads her to tear every thing she lays her hands on, and to exercise acts of violence on all those who approach her, so that they are forced to confine her with the straight jacket. This kind of control soon calms her violence; but she preserves so painful a recollection of her past extravagance, that she testifies the greatest repentance, and believes herself to have merited the severest punishment."

In a species of periodical madness, in which the subjects are drawn irresistibly to murder, M. Pinel remarks, as diagnostic signs, that these subjects have the consciousness of the atrocity of their actions, that they answer correctly the questions put to them, and show no derangement in their ideas or in their imagination. Thus a consistent manner of acting, a capacity of maintaining correct conversation, just answers, whether in the lucid periods, or at the moment of the illegal act, do not prove the absence of all insanity.

The most embarrassing cases, are those in which the alienation manifests itself without the symptoms, which usually accompany it, such as convulsion, heat, thirst, redness, fury; for then the faculties of the mind and soul do not appear at all deranged. A young man, having received a considerable wound near the temporal bone, was trepanned by Acrell. When the wound was cured, he could not abstain from theft, though before he had no such propensity. Acrell knew that it was only to be attributed to the lesion of the head, and had him released from prison. This phenomenon is not rare in pregnancy. We know four examples of women, who, in their ordinary state, have not the least propensity to theft, but who, during pregnancy, are impelled to it by violent inclination. We know that women subject to *leucorhœa*, and pregnant women, experience singular fancies: now, if they have this disordered appetite for eating charcoal, chalk, and dung; if a virtuous woman, during pregnancy, cannot bear the sight of a beloved husband, or experience the visiting of a gross passion, why find it incredible, that irresistible propensities to illegal actions should also be developed at these periods? Prochaska * relates from Schenk, that a pregnant woman observing the naked arm of a butcher, was seized with an irresistible desire to bite a piece. She forced her husband to hire the butcher to submit to the operation. Another woman, in the same condition, satisfied a horrible longing for eating the flesh of her husband. She killed him, salted the flesh and fed on it several months.

---

* L. c. p. 283. † L. c. p. 88.

As the nature of reasoning madness is not very generally known, it happens that malefactors, who belong to this class, and who are seen to act and reason in a consistent manner, are, in some countries, condemned to imprisonment or death; while, in others, they are consigned to insane hospitals.

Of Madness, accompanied with Visions and Inspirations.

Mental alienation, sometimes, is accompanied with visions and inspirations; and this peculiar symptom shows, that the malady has acquired its greatest degree of exaltation. The unfortunate subjects conduct themselves in the most consistent manner in the pursuit of the project they have formed; they act, as M. Pinel remarks, with a firm determination, and in the most uncontrollable manner. Such a madman, conscious of the support of a higher power, despises all the efforts made to dissuade him from his purpose, and places himself above all human considerations. His conduct is often calm: he hardly judges other men worthy of being the confidants of his secret motives. He hopes nothing from their assistance; he fears not their threats. He who has experienced, were it only for a moment, the effect of visions and inspirations, and who is not very familiar with the knowledge of nature, can hardly be persuaded, when he returns to a regular state, that all he has experienced is unreal. Do these visions continue? Does the madman hear incessantly, or at different times and places, this imagined voice of authority which addresses him? How shall we, then, find means to restrain him, except by relieving the irritation and the derangement within? The most furious madmen often allow themselves to be turned from their purpose by menaces, by the sight of the superintendent or physician, by mild and reasonable treatment; but what effect will all human efforts produce on a man, whom heaven and hell command, or who has them under his orders? M. Pinel* cites the example of an old monk, whose reason had been impaired by devotion. He thought, one night, that he had seen, in a dream, the Virgin surrounded by a choir of happy spirits, and that he had received an express order to put to death a man whom he viewed as incredulous. This murderous project would have been executed, had not the madman betrayed his intentions, and been prevented by severe confinement. The same author † also speaks of a credulous vine-dresser, whose imagination was so strongly shaken by the sermon of a missionary, that he believed himself condemned to eternal fires, and that he could only save his family, from the same fate, by what is called the baptism of blood, or martyrdom. He first tried to commit murder on his wife, who, with great difficulty, succeeded in escaping his hands; soon after, his furious hand was turned upon his two young children, and he had the barbarity to murder them in cold blood, in order to obtain immortal life for them. When surrendered into the hands of justice, he cut the throat of his fellow-prisoner, still with the intention of making an expiatory sacrifice. His madness being ascertained, he was condemned to be shut up for the rest of his life in the cells of the Bicêtre. The solitude of a long imprisonment, always fitted to exalt the imagination, and the idea of having escaped death, notwithstanding the sentence, which he supposed to have been passed by the judges, still aggravate his delirium, and make him believe that he is clothed with almighty power, or, to use his expression, that he is the fourth person in the Trinity; that his special mission is to save the world by the baptism of blood, and that all the potentates of the world, united, could not touch his life. His madness is, however, partial, and limited to this religious phrenzy; he appeared, on every other subject, to enjoy the soundest reason. This subject had passed more than six years in close confinement, and, from the uniform appearance he presented of a calm and tranquil state, it had been determined to grant him the liberty of entering the courts of the hospital with the other convalescents. Four more years of trial had served to establish a confidence in his cure, when, on a sudden, he again manifested his superstitious and sanguinary ideas. On a Christmas eve, he formed a project of making an expiatory sacrifice of whatever should fall into his hands. He obtained a shoe-maker's knife, seized the moment when the overseer was making his rounds, made a thrust at him from behind, which fortunately only grazed his ribs, cut the throats of two patients who were near him, and would have continued his carnage, had not the attendants secured his person, and thus put a stop to his fury.

---

* Op. minora. tom. ii. p. 98.

---

* L. c. p. 165.

† L. c. p. 109.

We were shown, at Berne, the fanatics, who, a few years before, had wished to establish a new religious sect. As we remarked in the leader a great development of the organs of visions, we asked this man if he had ever seen any spirits. The prisoner, named Kœper, answered, No. We begged him then to relate to us those events of his life, which had made the strongest impression on him. He told us, and his calm and confident countenance assured us of his candor, that, from his childhood, religion had occupied all his thoughts, and that he had read the Holy Scripture, and all the commentators thereon, with the greatest attention; but that the extreme diversity of opinions had convinced him, that he should not find the true religion in this manner; that he had therefore renounced reading and research, and had earnestly supplicated the Deity, that, if not contrary to his eternal decrees, he would make him an immediate revelation of the truth. After having prayed a long time, he one night saw the room filled with as brilliant a light as could be produced by many suns. In the midst of this splendor, our Lord Jesus Christ appeared to him, and revealed the true religion. Kœper had sought to spread it with indefatigable zeal, which was with him a matter of duty. It was impossible to make this man believe, that he had been led astray by illusions.

Of Alienations which lead their subjects to attempt the lives of their relations, of their children, or of other persons, innocent in respect to them.

It remains to speak of one of the most melancholy cases; one which is strongly connected with the propensity to simple suicide. This peculiar case is when the individual, who wishes to terminate his own life, begins by destroying those beings who are dearest to him. A cordwainer at Strasbourg, killed his wife and three of his children, and would have killed the fourth, if it had not been withdrawn from his fury. Having committed this shocking action, he ripped open his own belly; but the wound not being mortal, he drew back the knife, and pierced his heart through and through. This man had the reputation of being mild and faithful, a good father, and a good husband. No one could discover what tempted him to this horrible action. At Leopold in Gallacia, one K. killed his wife, the object of his warmest affection, and would then have shot himself with a pistol, but missed. While people were forcing his door, he fired a second pistol and killed himself. His previous conduct had always been blameless, and all that could be learned was, that he was discontented with his condition, and thought he deserved a better. At Hamburg, R—, a respected instructor, killed his wife and two small children, sparing two others who had been confided to him. A similar circumstance happened at Amsterdam, and several other facts of this kind have come to our knowledge.

What will my readers think on reading these atrocities? The greater part will say to themselves, that the torment of an insupportable existence, and the most cutting remorse could alone have produced so frightful an action, and they will regard, as infernal selfishness, the crime of an individual, who takes the life of his family, because he is tired of life. The judgment of the philosophic physician will be very different. He perceives, in these deplorable acts, only the symptoms of the most frightful and the most pitiable disease. Whatever is contrary to nature, in the conduct of these unhappy beings, should fix the attention of whoever occupies himself with the nature of man. I doubt its being conceived that the husband who loves his wife, the father who loves his children, can, while possessing reason, become their murderers. Add to this, what always is the case, that these murderers have no private end in view; that, directly after the act, they destroy themselves, or surrender their persons, and ask for death. Why have not these actions, until now, been attributed to insanity? Let the reader examine a faithful picture of what passes in this malady till its fatal crisis, and then judge.

In the commencement of this malady, the greatest disorder is manifested in the head, and in the viscera of the abdomen. We observe eructation, flatulence, disordered appetite, irregular evacuations, derangements of the menstrual and hemorrhoidal fluxes. The complexion changes, becomes of a greenish, yellow, and earthy color, especially about the nose and mouth, so that the face loses all its brightness. The eyes are half closed, sunken, troubled, and the white assumes a leaden hue. In other individuals, on the contrary, the face becomes more highly colored, more animated, and more lively, and the eyes are inflamed: some of these subjects preserve their strength and their flesh; others grow thin, and daily find themselves more depressed and more feeble. Sometimes the whole surface of the skin is deprived of feeling; and the sufferers complain that their hands and feet are swollen, and feel like cotton: but much more frequently the sensibility of the skin is increased; they feel over the whole body, or only in certain places, especially the thighs and feet, a heat like that produced by burning coals. When the evil is at its height, this heat produces on the patients, the effects of a hot blast, and disappears in like manner; it is felt in the intestines, or it passes from one place to another. Most of the subjects are then depressed, pusillanimous, cowardly, fearful; so that, frequently, strong men tremble before children. Some refuse or are not disposed to communicate their condition to others. This apparent indifference, this apathy, this perfidious silence, ordinarily marks the most dangerous cases. Some annoy all those around them, by trifling bickerings; they see, every where, nothing but misfortune and wickedness; and even when their affairs present a picture of prosperity, they are in despair, lest their children be plunged in famine and misery. Some imagine that every body despises or persecutes them; they complain unceasingly, that they are neglected, that justice is not done them. Sometimes, all the symptoms suddenly disappear, and again show themselves as suddenly. The melancholy and pusillanimity increase daily: most of these subjects feel a sharp and permanent pain above the root of the nose, and in the middle of the lower part of the forehead: sometimes this pain has its seat at the top of the head; often, too, some complain of an insupportable tension in the region of the forehead, and a painful constriction in the region of the belly, which is, as it were, compressed by a hoop. To these symptoms, are frequently added paroxysms of suffocating convulsions, of frightful anxiety, of despair, of an involuntary propensity and secret impulse to commit suicide. In a word, this malady, besides the symptoms we have indicated, presents all those which ordinarily accompany the propensity to self destruction. I shall, hereafter, treat in detail of this propensity, and shall prove that it arises from real disease. That of which I now speak, is only a frightful variety of the same malady.

A baker of Manheim, who, from his youth, had shown in all his enterprises a very timid character, and who had for ten years experienced attacks of deep melancholy, also experienced from this last epoch a general weakness of nerves. He imagined that the purchase he had made of a house, caused his unhappiness, and that of his wife, whom he greatly loved. He complains incessantly, and laments his situation, which he regards as most desolate. He has sometimes had paroxysms of insupportable agony: he continually wishes for death, and would long since have inflicted it on himself, if, to use his expression, it were not a sin. He often speaks of a French blacksmith, who killed himself after destroying his wife: "You are to be pitied," he will sometimes say to his wife, in the most moving tone; "I must do as the French blacksmith did." We advised him to separate himself from his wife, but we know not whether he has adopted our precaution.

I know a woman twenty-six years of age, now well, who was attacked with the same disease: she has had successively all the symptoms of this disease: she experienced, especially at the times of the periodical evacuations, inexpressible torture, and the fearful temptation to destroy herself, and to kill her husband and children, who were exceedingly dear to her. She shuddered with fear, as she pictured the combat which took place within her, between her duty, her principles of religion, and the impulse which urged her to this atrocious act. For a long time she dared not bathe the youngest of her children, because an internal voice constantly said to her, "Let him slip, let him slip." Frequently, she had hardly the strength and the time necessary to throw away a knife which she was tempted to plunge in her own bosom, and that of her children. Did she enter the chamber of her children or husband, and find them asleep? the desire of killing them at once assailed her. Sometimes she shut precipitately after her, the door of their chamber, and threw away the key to remove the possibility of returning to them during the night, if she happened not to be able to resist this infernal temptation.

It is thus that these unfortunate beings often pass whole years in a fearful struggle. Many keep a regular journal, in which, though touching on every other subject, they return without ceasing, to their own unhappy condition. They often exclaim, in the accent of despair, *I am mad, I am insane!* Often the purpose towards which they feel themselves drawn, excites in them the most poignant anguish, and yet the idea is continually renewed. They say, and they write, still thinking of self-destruction, "I shall do it, notwithstanding." Who would believe that these expressions, and these writings, which so well depict the trouble of these unhappy beings, have often contributed to cause their actions to be regarded as premeditated and done deliberately. Their madness, it is said, is only feigned: a madman does not say I am mad, and madness does not reason. This false and barbarous mode of argument has sent to the scaffold, beings, to whom there was nothing to reproach, except the derangement of their reason, or, more properly speaking, a disease of the brain.

Some of these subjects carry about them, for sever months, and even several years, instruments of murde uncertain and irresolute, as to the manner, the plac the time of putting an end to their life, and that of tho who belong to them. Their nervous system is dai more agitated; their pusillanimity and weakness mind augments unceasingly; they harass themselve despair of the safety of their souls, consider themselve the children of eternal reprobation, or regard the wor as a valley of tears and perdition, and form but a singl wish, that of delivering themselves and their childre from it. Thenceforth, they make continual efforts t break the chains which bind them. Though their measures are commonly well taken, the execution does not always succeed. It often happens, that the blow they give themselves, is not mortal, or that, in throwing themselves from the precipice, their destruction is not completed, or that they are drawn from the water too soon. It is, however, very rare, that such adventures cure them. The greater part remain melancholy or depressed. At the end of some days they seem to repent of what they have done; they are ashamed of it, and for some time take a part in the business of life. But the paroxysms soon return with new violence, till, at length, the most perfidious symptoms, such as visions, apparitions, the sound, and the orders of strange voices are joined to them. These are the prognostics of the most terrible paroxysms. If, during one of these, the madman kills the persons who are dear to him, he generally hastens to destroy himself; or, if it happens that his paroxysm is in some sort quieted by the blood he has spilled, or the blows he has given himself have been too weak, or he has been interrupted in his proceedings, he delivers himself up to justice, and begs for death, which alone affords him the hope of a period to his suffering.

Sometimes this same malady is concealed under a mask, in appearance altogether different. Life is equally a burden to these subjects; but they have not the energy to inflict death on themselves; they seek, by a kind of confusion and contradiction in their ideas, the means of having it inflicted by others. For this purpose, they ordinarily commit a murder on persons who have never offended them, and often even upon children. They then go and accuse themselves, and even carry to the judges the victims of their fury, eagerly demanding death; and if the judge, recognizing the acts as the effects of insanity, condemns them only to confinement in an insane hospital, they are plunged in despair.

Those physicians, who regard the kind of melancholy which leads to self-destruction, as well as to that of others, as incurable, are in error. I have cured, radically, several subjects, who had experienced all the symptoms, and who had even attempted to destroy themselves. These subjects, after medical treatment, continued several weeks, usually passed, by stool, a large quantity of thready mucus, fishy, colored, and acrid, and likewise freed themselves from all sorts of impurities, as well by urine as by the menstrual and hemorrhoidal fluxes. These critical evacuations which continue a long time, are more abundant at certain periodical times; and as, at their approach, the symptoms of the malady augment, their apparent relapses serve to announce an approaching evacuation. By degrees the complexion grows clear and bright, the eyes are animated, the mind becomes more serene, and the patients resume their interest in objects around, and feel a confidence in the remedies to which at the outset it was necessary to force them. It is not till after several artificial critical evacuations, that a complete cure is obtained, and the treatment is of greater or less duration, according as the evil has been of longer or shorter standing, and more or less firmly rooted. Even after a long interval, great changes in the atmosphere, severe and continued heat, strongly excited passions and affections, still give rise to the fear of relapse. The cure is much less easy, less complete, and durable, when the disease is hereditary, or when the patients have experienced symptoms from early childhood; as, for example, from the age of seven to twelve years.

Such is the true history, drawn from nature, of this deplorable malady, which, unhappily, may assume, to a certain degree, the appearance of criminal premeditation. None better merit our compassion than these unfortunate subjects, and yet this terrible malady is almost entirely misunderstood. In general, very few physicians comprehend the different forms of disease of the soul and mind; and it may excite surprise, that this part of the natural history of man should not have attracted more profound attention. This description of persons are commonly regarded as unquiet subjects, turbulent, excited. They are ridiculed, treated ill, and reproached with their ill humor and their odious chimeras. Those about them even charge them with impiety, in place of treating them with mildness, humoring them during their paroxysm, and confiding them to the care of the philosophic physician. Above all, no one is persuaded that this malady almost always terminates in involuntary and murderous paroxysms; and there is the greatest difficulty in inducing the superior authorities to adopt the necessary measures of security. These subjects are accused of having a depraved imagination, and it is supposed, that it only depends on themselves to think and reason like other men. The catastrophe arrives, and is charged to a thousand accidental circumstances of no importance. The unfortunate man, it is said, was in debt, he has been ill treated, and refused a place which was due to him, &c.; while it is forgotten, that similar causes take place every day with other individuals without producing similar effects.

In treating of the moral qualities and intellectual faculties, and of their peculiar organs, I shall embrace every opportunity, as I have promised, to make the most interesting applications to education, morals, medicine, legislation, &c.